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Leader Empowering Behaviour as a Predictor of Nurse and Patient Outcomes

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ABSTRACT

Nursing leadership remains a critical factor during healthcare transformation. Fiscal constraints have driven the implementation of interprofessional care delivery models that include professional and non-professional team members. Canadian hospital nurses coordinate care delivery to ensure patient needs are met efficiently by the most appropriate provider. Yet, Ontario statistics indicate the nursing profession is at risk due to decreasing numbers of experienced nurses. In addition to care coordination, this valuable resource is needed to mentor new nurses entering the profession.

Nurse leaders who promote healthy working conditions have been associated with positive nurse and unit outcomes. However, mechanisms to explain how nurse leaders influence outcomes are not well understood (Cummings et al., 2018). Conger and Kanungo's (1988) *Process Model of Empowerment* provided a framework to examine how leader empowering behaviour (LEB) influenced experienced nurses' self-efficacy, interprofessional collaboration, job turnover intentions and nurse-assessed adverse patient outcomes.

A non-experimental predictive design and structural equation modelling techniques in Mplus were used to conduct a secondary analysis of baseline data from the *Authentic Leadership for New Graduate Nurse Success* study (Laschinger, Wong, Finegan & Fida, 2015). Participants were experienced registered nurses (n = 478) from three Canadian provinces. Confirmatory factor analysis supported the use of Hui's (1994) adapted 16-item LEB scale and findings indicated the hypothesized model was a good fit to the data: $\chi^2(164) = 333.021$, p = .000; RMSEA = .047; CFI = .965; TLI = .959; SRMR = .051.

All paths were significant ($p < .001$) and in hypothesized directions, with the exception of the self-efficacy – IPC relationship which was positive but not significant. Interprofessional collaboration mediated the relationships between LEB and nurses' assessment of adverse events and job turnover intentions. These results suggest LEB play an important role in creating interprofessional team environments that support quality patient care and retention of experienced nurses. The findings will be of interest to academic and hospital leaders as they consider nurse leader selection, development programs and performance management systems.

Keywords: leader empowering behaviour, self-efficacy, interprofessional collaboration, job turnover intentions, patient outcomes

SUMMARY FOR LAY AUDIENCE

Huge changes have been made to the healthcare system over the last thirty years. Reduced budgets and new funding models have altered the ways hospitals provide patient care. One solution has been to add in nursing staff with less education and providers with different backgrounds. Nurses have continued to lead these modern healthcare teams to make sure care is delivered by the right provider at the right time. At the same time, the nursing staff population is aging. While experienced nurses are retiring or taking jobs in nursing homes or the community, many brand-new nurses are starting hospital employment. These new nurses rely on the expertise of seasoned hospital nurses to show them the way as they begin their careers.

Nurse leaders are known to support nursing staff during times of change and improve patient and nurse results. In this research we studied how improved results occur. We looked at how empowering leader behaviour shaped the views of 478 Canadian nurses with three or more years experience from Alberta, Ontario and Nova Scotia. We found that empowering leader behaviour positively influenced these nurses' opinions about their ability to work in a healthcare team, their views about care quality and whether they wanted to remain in their jobs.

Understanding the influence of empowering nurse leader behaviour on these results is important. Empowering leader behaviour offers a way to stabilize the nursing workforce and support new nurses. The results also highlight the importance of empowering leader behaviour in strengthening modern healthcare teams. This research will be of interest to Canadian nurse leaders, policy makers, and educators. Including empowering leader behaviour in nurse leader educational programs, hiring processes and

annual review processes will reinforce their importance, while stabilizing the nursing workforce and supporting healthcare teams.

CO-AUTHORSHIP STATEMENT

Karen Cziraki conducted this dissertation work under the supervision of Dr. Carol Wong, Dr. Michael Kerr, and Dr. Joan Finegan who will be co-authors on publications resulting from Chapters Two, Three, and Four.

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CHAPTER I: INTRODUCTION

Overview to the Dissertation

An integrated article format has been used for the presentation of this dissertation. Accordingly, five chapters are included. In Chapter One an overview and introduction to the dissertation is presented. This is followed by a review of the relevant literature in Chapter Two and a discussion of the importance of leader empowering behaviour (LEB) in the current healthcare environment. Chapters Three and Four are research papers. In Chapter Three psychometric testing of Hui's (1994) LEB instrument is described, and in Chapter Four the development and testing of a structural equation model involving variables described in this introductory chapter are reported. The dissertation concludes with Chapter Five where study findings are discussed, together with implications for nursing practice, education, policy and recommendations for future research.

Introduction

Since the advent of healthcare restructuring in the 1980's hospital nurses in Canada have experienced a plethora of healthcare organization and system changes. New funding arrangements and the movement of hospital resources to community settings have reduced the number of hospital beds and lengths of stay (Aiken et al., 2014; Simpson, Dearmon, & Graves, 2017). Meanwhile, complexity of care needs with an aging population demographic have placed additional demands on an already stressed healthcare system (Prince et al., 2015). Continued shifting of resources and economic pressures have also driven the introduction of new models of care delivery; such models integrate a variety of healthcare providers, including regulated non-nursing professionals, increasing numbers of registered practical nurses with less educational preparation, and unregulated nursing assistants (Canadian Institute for Health Information, 2017). These

changes have diluted registered nurse staffing levels and increased the responsibilities of registered nurses who remain in the workforce (Burke, Ng, & Wolpin, 2016).

Not surprisingly, over the past four decades there has been interest in leadership styles and strategies to optimize patient, staff and organizational outcomes. Nurse managers at the unit level have played an integral role in supporting and assisting staff through organizational and system changes; research confirms their role in influencing unit, program and organizational outcomes (Cummings et al., 2018). In a systematic review of the nursing leadership literature, Cummings and colleagues concluded that relational leadership styles (e.g. transformational, authentic), which focus on people rather than tasks, were related to higher levels of job satisfaction, organizational commitment, teamwork and empowerment (Cummings et al., 2018). Leader behaviours and practices, including participative decision-making, supportive coaching, praise and acknowledgement for good work have been associated with positive staff outcomes, such as job satisfaction and intention to stay (Cowden & Cummings, 2012).

Leader Empowering Behaviour (LEB) is a leadership style that focuses on and aims to empower employees. Described by Hui (1994), LEB constitutes specific leader behaviours that result in employee empowerment through the sharing of power between leaders and employees (Vecchio, Justin, & Pearce, 2010). When leaders delegate responsibility and authority to employees who are competent to make decisions at the level of the organization where business occurs, shared power transpires (Amundsen & Martinsen, 2014a). LEB theory differs from other leadership theories because it is rooted in self-efficacy theory and conceptualized as a motivational construct (Amundsen & Martinsen, 2014b; Conger & Kanungo, 1988). Conger and Kanungo (1988) and Hui (1994) posited that when employees understand the importance of their work, are

involved with decision-making and recognized for their efforts, provided with ongoing education and training opportunities to facilitate goal accomplishment and are enabled to initiate and perform their roles in an effective and efficient manner, these experiences enhance employee self-efficacy and promote the sharing of power between leader and employee. Conger and Kanungo (1988) argued these experiences can be facilitated through the leader's use of Bandura's (1977) sources of self-efficacy information. Examples include vicarious experiences for employees through visible and supportive interactions, use of verbal persuasion to encourage and share staff member accomplishments, and acting as mentors and coaches (Manojlovich, 2005).

Healthcare restructuring has promoted interest in system changes and outcomes. A recent report by the Canadian Institute for Health Information (CIHI: 2017) on the demographics and movement of Canada's regulated nurse population stated that healthcare organizations have explored strategies to optimize patient care outcomes. One strategy has been the implementation of new models of care that employ additional roles, including nursing assistants, and non-nursing regulated and unregulated health care providers. Such models of care require the registered nurse to coordinate patient care. As coordinator, the nurse must understand all team members' roles so that care needs are met by the most appropriate care provider in a collaborative and efficient fashion. Known as interprofessional collaboration, this approach to care delivery requires healthcare professionals to work in partnership to deliver high quality care. Interprofessional collaboration has gained increasing interest given claims that this approach to care delivery mitigates workforce shortages and improves patient, provider, organizational and system outcomes (Regan, Laschinger, & Wong, 2016; World Health Organization, 2010, 2013, 2019). Researchers have reported improvements in patient and

organizational outcomes such as patient mortality, fewer surgical complications and shorter hospital stays when care is delivered by collaborative teams (Kram, Brault, Van Durme, & Macq, 2018; Matziou, 2014; Suter, Deutschlander, & Mickelson, 2012; Virani, 2012).

The culture of the workplace is a critical enabler of collaboration among team members (Orchard, Curan, & Kaban, 2005). At the patient unit level, nurse managers are optimally positioned to promote interprofessional collaboration and role model collaborative behaviours. Trust, respect for professionals and their professional and ethical standards, as well as facilitating participation in decision-making are ways for nurse managers to promote collaborative conditions (Regan et al., 2016). Managers who are visible, accessible, and model interprofessional collaboration have been linked to higher levels of interprofessional collaboration among new graduate nurses (Anderson, Linden, Allen, & Gibbs, 2009; Pfaff, Baxter, Ploeg, & Jack, 2014). Specific to the research in this dissertation, it was proposed that demonstration of LEB by the nurse manager reinforces the value of staff nurses' work and how the staff nurse role relates and complements the work of other professionals to achieve established goals. Involving staff nurses in team decision-making should enhance staff nurse self-efficacy and effectiveness in the workplace as well as their perceptions of collaboration among team members.

Few, if any studies examining the relationships between LEB, self-efficacy and interprofessional collaboration could be found in the literature. One study that examined the impact of structural empowerment, authentic leadership, and professional practice environments on experienced nurses' perceptions of interprofessional collaboration found that all three were significant independent predictors of interprofessional collaboration

(Regan et al., 2016). In another study, Laschinger and Smith (2013) reported that interprofessional collaboration in new graduate nurses was influenced by supportive work environments and authentic leaders. Together, these studies indicate that interprofessional collaboration is enhanced in the presence of supportive leadership and work contexts. Considering the limited LEB research in this area, this dissertation builds on the existing literature by exploring the relationship between empowering leader behavior (LEB) and interprofessional collaboration.

A handful of nursing studies have examined the impact of LEB on job satisfaction, job tension, burnout, work engagement, and effectiveness through the lens of structural empowerment (Cziraki & Laschinger, 2014; Dahinten et al., 2014; Greco, Laschinger & Wong, 2006; Laschinger, Wong, McMahon, & Kaufmann, 1999; Meyer Bratt, Broome, Kelber, & Lostocco, 2000). However, examination of the relationship between leadership behaviours and nurse and patient outcomes through self-efficacy as a motivational construct remains understudied. Nurse leaders who demonstrate behaviours that enhance staff nurses' self-efficacy and confidence that they can make a positive difference in their workplaces for colleagues and themselves, will positively influence unit and organizational outcomes (Manojlovich, 2005). Associations have been found between relational leadership styles such as transformational and authentic leadership styles and a variety of outcomes including patient satisfaction, patient mortality, medication errors, use of restraints, and nosocomial infections (Wong, Cummings, & Ducharme, 2013). Yet, there is a dearth of literature exploring the impact of LEB on patient outcomes. This research study adds to the nursing leadership literature by examining the relationships between Leader Empowering Behaviour (LEB) and patient and nurse outcomes.

Monitoring patient outcomes, specifically adverse patient events, is important during healthcare changes. Adverse patient events are defined as unintentional injuries or complications that are attributed to healthcare management and not the patient's healthcare condition, that result in death, disability or an increased hospital length of stay (Baker et al., 2004). Researchers have identified the impact of negative work environments on adverse patient events, such as mortality, medication errors, nosocomial infections, pressure injuries, and falls (Aiken et al., 2001; Wong et al., 2013). In a systematic review of the literature, Wong et al., (2013) concluded that positive relational leadership styles were associated with lower mortality rates, fewer medication errors, less use of restraints, and less nosocomial infections. In the same year, Wong and Giallonardo (2013) reported the positive effects of authentic leadership on staff nurses' ratings of adverse patient outcomes, which have been shown to correlate well with directly measured patient outcomes (McHugh & Witkoski, 2012). Earlier, Wong, Laschinger, and Cummings (2010) reported a small significant indirect effect of authentic leadership on staff nurse perceptions of unit care quality through trust in the manager and work engagement. As far as is known, there is no research that has examined the impact of LEB on nurse-assessed adverse patient outcomes. It is proposed that positive leader behaviours (LEB) reduce nurse-assessed adverse patient outcomes. The mechanism is motivational in nature through enhancement of staff nurse self-efficacy in the workplace. Registered nurses who believe they can solve problems in their workplace and are effective in their roles, will also experience an enhanced ability to work effectively with other members of the team, enhancing their perceptions of interprofessional collaboration in the work environment, and in turn reducing their ratings of adverse patient outcomes.

The population of interest in this dissertation work is registered nurses (RN). Registered nurses practise in a variety of settings, including point of care, education, administration, research and policy. The Canadian Nurses' Association (2015) defines registered nurses in the following way: "RNs are self-regulated health care professionals who work autonomously and in collaboration with others to enable individuals, families, groups, communities and populations to achieve their optimal levels of health. At all stages of life, in situations of health, illness, injury and disability, RNs deliver direct health-care services, coordinate care and support clients in managing their own health. RNs contribute to the health-care system through their leadership across a wide range of settings, in practice, education, administration, research and policy" (p. 5). According to the Canadian Nurses' Association (2015), RNs deliver care to patients and their families every day and night, including weekends and holidays. Although entry to RN practice in Canada is currently at the baccalaureate level, nurses who graduated prior to this requirement may be educated at the nursing diploma level, while others hold advanced degrees at the masters and doctoral levels.

The Canadian Nurses' Association (2015) reported that most Canadian RNs (62%) work in hospital settings. Recently, the Canadian Institute for Health Information (2017) reported a 4.7% decrease in hospital RNs and 4.9% increase in licensed/registered practical nurses (LPNs) since 2007. The numbers of LPNs continued to grow across Canada during 2018; the 3.1% LPN annual growth rate in Canada was reported to be four times the RN annual growth rate (CIHI, 2019). This ongoing change in nursing skill mix is largely attributed to restrained provincial and territorial budgets, resulting in pressure on hospitals to balance healthcare services with costs (CIHI, 2017). Further compounding this situation, Auerbach, Buerhaus, and Stagier (2014) claimed that RNs tend to shift

from the acute care inpatient setting to nonhospital settings during their careers. By age 50 years, the percentage of RNs employed in hospitals decreased to approximately 50 percent with more nursing positions in ambulatory and nonhospital settings (Auerbach et al., 2014). The movement of mature nurses away from the hospital setting warrants attention as this cohort offers invaluable support to entry level staff nurses (Henderson & Eaton, 2013; Hodges, Keeley, & Troyan, 2008; Jewell, 2013).

Ongoing changes to the healthcare system, including changes in skill mix and the introduction of regulated and unregulated providers, requires the knowledge and expertise of the RN to lead interprofessional teams and coordinate care delivery (Canadian Nurses' Association, 2015). It is therefore important to determine the nurse leader behaviours that support RNs in this important role, and ultimately influence them to continue in their positions as hospital RNs. The experienced RN population is of interest in this study because this cohort has the knowledge and experience to serve as a resource to junior staff (Henderson & Eaton, 2013; Hodges, Keeley, & Troyan, 2008; Jewell, 2013). Loss of intellectual capital due to turnover in the experienced RN group presents significant losses for the profession, patients and the healthcare system (Canadian Institute for Health Information, 2017). The population under study in this research is experienced RNs in Canada, more specifically, nurses in direct patient care roles who had greater than three years of experience in acute care settings.

The Canadian Institute for Health Information (CIHI: 2019) reported the average age for RNs across Canada was 44 years with decreasing numbers of regulated nurses aged 55 and older from 96,584 in 2014 to 93,343 in 2018. CIHI (2019) attributes these trends to increasing numbers of nursing assistants, growing numbers of younger nurses entering the workforce, and older nurses retiring. In an earlier report, CIHI (2017)

reported a drop in mid-career nurses aged 35-54 years from 56.7% of the regulated nurse population in 2007 to 47.8% in 2016.

In Ontario, the College of Nurses of Ontario (CNO: 2017) also reported decreasing numbers of RNs in the pre-retirement phases: RNs aged 50-54 decreased from 14,285 in 2008 to 13,652 in 2017, and RNs aged 55-59 decreased from 13,349 in 2008 to 11,215 in 2017. Mid-career RNs also declined during the same timeframe from 12,748 to 10,685 for 40-44 years, and from 13,609 to 11,965 for 45-49 years. Notably, younger RNs in Ontario increased during this 10-year period. RNs 25-29 years increased from 6,774 to 11.034, and RNs 30-34 years increased from 8,279 to 10,451 years (CNO, 2017). The influx of younger, less experienced RNs who require mentoring and support by fewer experienced nurses presents challenges to the healthcare system and nursing profession.

These data underscore the potential challenges related to shifting nurse demographic trends. In this research, understanding the impact of LEB on nurses' turnover intentions, defined as a job move, exiting the organization or leaving the nursing profession altogether, may inform healthcare leader routine practices, as well as the ways in which leaders are formally educated (Hayes et al., 2006). Retention of experienced older and mid-career nurses is particularly important in the hospital setting, since many RNs move out of the hospital setting as they age (Auerbach et al., 2014). Aside from minimizing workforce changes, the reduction of nurse turnover has positive impacts on job satisfaction, patient safety, intellectual capital losses, as well as orientation and overtime costs (Li & Jones, 2013). Equally as important, are the growing numbers of younger nurses entering the workforce who require mid-career and older nurses to act as mentors to facilitate their transition into practice (CIHI, 2017). Because actual turnover

can be influenced by a variety of factors such as career stage, workload, and shift work, this research focuses on turnover intention or desire to leave a position in the next year (Kelloway, Gottlieb, & Barham, 1999). This direction is supported by Beecroft, Dorey, and Wenten (2008), who reported that employee expression of intention to leave a job is the best predictor of actual turnover.

In a recent meta-analysis that examined nursing turnover, supportive and communicative leadership positively impacted actual nurse turnover (Nei, Anderson, Snyder, & Litwiller, 2015). Duffield, Roche, Blay, and Stasa (2011) reported that managers, who were perceived to be good leaders through consulting with staff and providing praise and recognition, also had higher staff satisfaction levels and retention rates. In this research, LEB offers a way to examine the impact of leadership behaviours on staff nurses' job turnover intentions. When staff nurses perceive that their nurse leader reinforces the meaning of their work, promotes opportunities for decision-making, provides resources, creates conditions that enable effective and efficient workflows, and acknowledges high performance, they also perceive that this leader enhances staff nurses' self-efficacy concerning their effectiveness in the workplace and their perceptions of interprofessional collaboration. A gap in the literature concerns the impact of interprofessional collaboration on staff intention to leave. Thus, it is proposed that when staff nurses perceive the environment in which they are working is supportive, they report decreased job turnover intentions.

In this section, an overview of the background and variables of interest for this dissertation has been presented. The next section provides details concerning the research that was conducted for this dissertation.

The Present Study

This section includes information about the research study that was conducted to complete this dissertation work, including the purpose, theoretical framework and methods.

Purpose

The aim of this study was to address gaps in the literature by testing a theoretical model examining relationships between LEB and staff nurses' self-efficacy in the workplace, interprofessional collaboration, nurse-assessed adverse patient outcomes, and turnover intentions. The population of interest was the experienced nurse working in a hospital setting in three Canadian provinces (Alberta, Ontario, Nova Scotia). Hui's (1994) 16-item LEB scale was used to measure empowering leader behaviour in this research and confirmatory factor analysis of this instrument was conducted to confirm the measurement model for this study.

Theoretical Framework

Conger and Kanungo (1988) Process Model of Empowerment and Hui's (1994) LEB theory were used as the theoretical framework for this study. Building on Bandura's (1977) self-efficacy theory, Conger and Kanungo (1988) proposed a theory that views empowerment as an individual motivational construct. Leader behaviours are integral to Conger and Kanungo's (1988) theory as they provide the sources of information that reduce powerlessness, enhance employee self-efficacy, and the sharing of power between manager and employee. Four empowering leader practices were identified by Conger and Kanungo (1988): (a) conveying confidence in employees; (b) fostering participation in decision-making; (c) promoting autonomy by minimizing organizational barriers; and (d) setting motivational or important goals. Hui (1994) further developed Conger and

Kanungo's (1988) work by reviewing the literature, providing definitions and making minor word changes. Hui (1994) added a fifth LEB that addressed goal accomplishment. Thus, Hui's (1994) five leader empowering behaviours comprised: enhancing the meaningfulness of work, fostering participation in decision-making, expressing confidence in high performance, facilitating goal accomplishment, and providing autonomy from bureaucratic constraints.

In the current healthcare environment of restructuring, new models of care and interprofessional collaboration, understanding the impact of LEB on nurses' empowerment is important as registered nurses, closest to the point of care, must be empowered to access resources and make decisions in response to patients' changing conditions, at all times of the day and night (Manojlovich, 2007). Comprehending how LEB influences experienced nurses' self-efficacy, interprofessional collaboration and their intention to remain in their positions may assist organizations to retain this precious resource. Based on Conger and Kanungo (1988) and Hui's (1994) works and the literature review, a theoretical model was developed to test the relationships among LEB, self-efficacy, interprofessional collaboration, nurse-assessed adverse events and job turnover intention.

Method

This research study comprised a secondary analysis of a dataset that was collected in 2015 as part of the *Authentic Leadership for New Graduate Nurse Success* (ALGN) study by Lashinger, Wong, Finegan, and Fida. The ALGN study used a longitudinal design, gathering data at three separate points in time from two samples of new graduate and experienced nurses. This secondary analysis examined data from experienced nurses at Time One only. As such, this study employed a cross-sectional design. The setting for

this research study traversed three provinces across Canada: Alberta, Ontario and Nova Scotia. Staff nurses working in acute care settings in eastern, central and western Canada are subject to similar legislation, professional standards and funding arrangements. Random samples of experienced nurses from these three Ontario provinces were selected and invited to complete a research questionnaire.

Prior to testing the hypothesized model, the measurement model was tested using confirmatory factor analysis techniques in MPlus (version 7.2, Muthén & Muthén 1998-2015) to confirm the five-factor structure of Hui's (1994) 16-item LEB instrument. Descriptive statistics and reliability estimates were calculated using the Statistical Software Package for Social Sciences (version 24, IBM 2015), followed by maximum likelihood estimation in MPlus to test the direct and indirect effects of LEB on the dependant variables.

Significance of the Study

Relational leadership styles such as transformational, authentic, and resonant leadership styles have been studied extensively in the nursing literature (Cummings et al. 2018). Conversely, LEB described by Conger and Kanungo (1988) and Hui (1994) has received limited attention. LEB provides a lens to view leadership through five leader empowering behaviours that enhance employee self-efficacy and outcomes (Hui, 1994). Grounded in Bandura's self-efficacy theory, LEB has the potential to strengthen staff nurses' self-efficacy or self-determination. This research addressed a gap in the literature by employing a motivational theoretical framework, specifically Conger and Kanungo's (1988) *Process Model of Empowerment* to test the relationship between manager LEB and staff nurse self-efficacy. The experienced nurse population is of interest in this research, since this cohort presents the greatest loss of intellectual capital due to turnover

and has influence over new nurses' understanding and experience of IPC due to their roles as preceptors or mentors.

Given the positive impact of LEB on nursing outcomes in a few previous research studies (Cziraki & Laschinger, 2014; Dahinten et al., 2014; Greco et al., 2006; Meyer-Bratt et al., 2000; Peachey, 2002), it is reasonable to predict that when leaders provide purpose and meaning to staff nurses' work, create opportunities for staff nurses to be involved with decision-making, support staff nurse performance through the provision of resources, acknowledge high performance, and create environments that optimize effectiveness and efficiency, such behaviours will positively influence staff nurse self-efficacy in the workplace, and in turn how nurses perceive they perform as an interprofessional team member. It was hypothesized that nurses who believe they are an effective part of the interprofessional team are less likely to perceive patients receive low quality care because they can access interprofessional team expertise and assistance to address changes in patient condition. In addition, nurses who experience support from their nurse manager and interprofessional team members are less likely to report a desire to leave their positions. Examining the influence of LEB on these dependent variables illuminates our understanding of how LEB influences empowerment and inform strategies to support experienced nurses.

Utilization of LEB by nurse managers is important in the current healthcare environment. These behaviours promote interprofessional collaboration, an important organizational strategy and goal for optimizing patient outcomes and decreasing duplication and gaps in service (WHO, 2010). The nurse manager is optimally placed to create the conditions for collaborative practice and role model expected behaviours. Understanding how nurse manager LEB influences interprofessional collaboration and

outcomes is essential as organizations continue to implement new models of care that require a collaborative approach. Thus, the findings from this research on both nurse and patient outcomes may be of interest to staff nurses and managers, as well as policy makers, administrators and educators who lead change at the system, academic and healthcare organization levels. Findings may inform nurse manager practices, their selection and development, as well as organization performance management programs and strategies to promote collaborative practice environments.

Organization of the Dissertation

This segment provides an overview as to how this integrated article dissertation has been organized. A short description of the content for each chapter is provided next.

In Chapter One, the background for the dissertation study and organization of dissertation work has been provided. A discussion of the key constructs in this research and their relationships has been discussed, including interprofessional collaboration, nurse-assessed adverse patient outcomes, and turnover intention, as well as information concerning experienced nurses as the population of interest.

Chapter Two includes the first manuscript entitled, "Relevance of Leader Empowering Behaviour for Managers in 21st Century Healthcare: A Discussion Paper," which contains a review of the empowering leadership literature. The focus of the discussion is the relevance of LEB in 21st century healthcare environments. A historical overview of empowerment and how this concept has been interpreted and used by a variety of disciplines during the last century is provided. A literature search of CINAHL, Medline, PsychInfo, OVID, JStor, ERIC, Proquest and Cochrane databases was conducted using the terms "empower," "nurse empowerment," "leadership," "nursing administration," "nurse manager," "interprofessional collaboration," "nurse-assessed

adverse patient outcomes," "turnover," and "turnover intention" to inform this review. In Chapter Two, a description of how the concept of empowerment has been used in nursing through the lenses of various theories such as, critical social, organizational and management, and social and psychological theories is also provided. The literature review culminates with descriptions of Bandura's (1977, 1997) self-efficacy theory, Conger and Kanungo (1988) and Hui's (1994) theories as the theoretical foundations for the dissertation study. The research studies examining LEB in nursing settings are discussed and the paper concludes with a discussion of the importance of nurse manager LEB in 21st century healthcare to support nursing staff and promote collaborative practice environments.

Chapter Three includes the third manuscript entitled, "Psychometric Assessment of Hui's (1994) 16-item Leader Empowering Behaviour Scale," in which the psychometric testing of Hui's (1994) 16-item LEB scale is described. Nursing data in this secondary analysis were used to confirm the measurement model of the original 5-factor LEB structure by Hui (1994). In this paper the psychometric properties of Hui's (1994) scale are compared and contrasted with Ahearne, Mathieu, and Rapp's (2005) LEB instrument; another LEB measure that was developed to reflect Conger and Kanungo's (1988) theory. Psychometric properties and factor structure are determined through reliability testing and confirmatory factor analysis procedures to confirm the suitability of Hui's (1994) 16-item scale for use in nursing research studies.

In Chapter Four the third manuscript entitled, "The Impact of Leader Empowering Behaviour on Experienced Nurses' Self-Efficacy, Interprofessional Collaboration, Nurse and Patient Outcomes," is presented. The results of testing the theoretical model hypothesizing that LEB influences SE, interprofessional collaboration, nurse-assessed

adverse events and turnover intentions, directly and indirectly through self-efficacy are explained. Descriptive statistics, correlations and results of structural equation modeling procedures are presented in addition to a discussion of limitations and implications for practice, education and future research. Finally, this is followed by Chapter Five, the concluding chapter, in which the findings of the preceding chapters are summarized and implications for nursing practice, management and education, together with ideas for future research are outlined.

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CHAPTER II: RELEVANCE OF LEADER EMPOWERING BEHAVIOUR FOR MANAGERS IN 21ST CENTURY HEALTHCARE: A DISCUSSION PAPER

Since the Canadian healthcare restructuring initiatives of the 1980's, nurse leaders have explored leadership styles and strategies to optimize patient, staff and organizational outcomes. Ongoing shifting of resources and fiscal pressures have continued into the 21st century and driven the introduction of new models of care in hospitals that employ registered practical nurses, non-nursing regulated, and unregulated health care providers (Canadian Institute for Health Information [CIHI], 2017). The registered nurse as coordinator of care must be knowledgeable about team members' roles and make decisions to ensure care is delivered collaboratively and efficiently by the most appropriate provider (CIHI, 2017). This approach to care delivery requires exemplary collaboration among all members of the team. Described as the way different health care professionals work together to provide high quality care, interprofessional collaboration has been touted as a strategy to address workforce shortages and improve patient, provider, organizational and system outcomes (Regan, Laschinger & Wong, 2015; World Health Organization [WHO], 2010). A growing body of evidence has supported improvements in patient and organizational outcomes when care is delivered by collaborative teams, including patient mortality, surgical complications and length of hospital stay (Kram, Brault, Van Durme, & Macq, J., 2018; Matziou, 2014; Suter, Deutschlander, &Mickelson, 2012; Virani, 2012; WHO 2010, 2013, 2019).

Given the increasing expectations for nurses to practise as autonomous knowledge workers in interprofessional environments, the concept of empowerment has gained interest in the field of nursing (Amundsen & Martinsen, 2014a; Friend & Sieloff, 2018).

Likewise, leadership styles that support and motivate nurses as self-directed professionals have also garnered attention (Cheong, Yammarino, Dionne, Spain & Tsai, 2019).

Leader empowering behaviour described by Hui (1994) posits that when five behaviours are practised by leaders, the result is the sharing of power with subordinates and improved outcomes (Vecchio, Justin, & Pearce, 2010). The purpose of this paper is to review and discuss the theoretical and empirical background for leader empowering behaviour and its relevance to the leadership practice of acute-care nurse managers in the current healthcare environment. The paper is informed by a historical overview of empowerment as a concept in disciplines outside of nursing and followed by a discussion of the ways empowerment has been conceptualized by nursing scholars. Descriptions of Bandura's (1977) self-efficacy theory and Conger and Kanungo's (1988) Process Model of Empowerment as the theoretical foundations for Hui's (1994) concept and measurement of Leader Empowering Behaviour (LEB) are provided. The paper concludes with a discussion about the importance and applicability of LEB in today's healthcare environments.

Literature Review

Empowerment is a broad term that first appeared in the literature in the 1920's; however, it was rarely used prior to the mid 1970's (McCarthy & Freeman, 2008). The American Heritage Dictionary of the English Language (2000) defines empower as: "to invest with power, especially legal power or official authority; to equip or supply with an ability; to enable." Empowerment incorporates the term power, with the suffix "ment," meaning result or product (Hawks, 1992). The meaning and definition for empowerment has evolved over the last century as various academic disciplines embraced this term (Rao, 2012). The interpretation and application of empowerment in disciplines outside of

nursing are briefly discussed first; followed by an examination of empowerment in nursing.

Empowerment in Disciplines Outside of Nursing

The term empowerment became popular in religious studies during the 1960s and was used in reference to groups of individuals (McCarthy & Freeman, 2008). In this discipline, empowerment meant having power (giving power or authority), increasing the power of those who were underrepresented (including breaking the glass ceiling that prevented women and minorities from advancing in their careers), and enhancing a positive self-image among the lower classes of people, particularly the poor and marginalized (Bartunek & Spreitzer, 2006). In the early 1970's, the focus of empowerment shifted in the disciplines of sociology, education, psychology and social work, from groups of people to the individual, with a focus on enhancing human welfare (Rao, 2012). The discipline of sociology, influenced by the civil rights movement and anti-Vietnam war protests, interpreted empowerment as political activism, and increasing the power of the powerless and minority groups (Rao 2012). It was also during this era that the women's movement gained momentum. Women were perceived to be oppressed by a patriarchal society and challenged to resist this power imbalance (Bartunek & Spreitzer, 2006).

During the 1970's in the education literature there was a focus on the empowerment of students including those with learning disabilities. Knowledge was viewed as a way for all individuals to gain control over their lives; while in the psychology literature, empowerment was directed to issues of human agency, mastery, and control (Bandura, 1989). Simultaneously, the discipline of social work focused on control over individual destiny, self-worth, and enhancing the power of underrepresented

individuals (Bartunek & Spreitzer, 2006; McCarthy & Holbrook, 2008). In the 1980s, the term empowerment appeared in the management literature, with a very different meaning from these other disciplines (Rao, 2012). From the management discipline's perspective, empowerment meant promoting employee productivity, particularly employees with high levels of skills and education, known as "knowledge workers" (Amundsen & Martinsen, 2014b; Kanter, 1977, 1993).

Empowerment in Nursing

In the nursing literature, empowerment has been an important subject for debate and research as scholars have sought to understand the nature and acquisition of power for the nursing profession and patient care (Gilbert, 1995; Manojlovich, 2007). Empowerment is understood in different ways by managers, staff nurses and scholars. In the management literature, empowerment has been viewed as the delegation of authority and sharing of power through participative management and forums to promote networking and quality improvement activities (Rodwell, 1996). In contrast, in the nursing literature, Chandler (1991) reported findings from a qualitative nursing study of 56 staff nurses, indicating that interpersonal relationships are foundational to empowerment; empowerment occurs through enhanced resources, skills and successes, and is a consequence of therapeutic interactions (Rodwell, 1996). Manojlovich (2007) purported that empowerment in nursing practice is influenced by three factors; specifically, workplaces with empowerment structures, a personal conviction that one can be empowered, and the recognition of empowerment though caring nursing relationships.

The ambiguity of the term and the various contexts in which it has been used have presented challenges to articulating a common definition. Empowerment has been defined as a concept built on relationships that foster the development of strengths or

strategies and enable individuals to act on opportunities and remove barriers (Bandura, 1997), or as a process where connections with others creates inner strength (Wahlin, 2017). Thus, empowerment has been defined by the context and individuals involved (Rappaport, 1984). Nursing has drawn from other disciplines and used three common theoretical approaches in the literature; specifically, critical social and feminist, organizational/management, and social psychological theories (Trus, Razbadauskas, Doran & Suominen, 2012). These approaches are discussed next.

Critical social and feminist theory. Critical social theories frame empowerment in terms of the history and structure of relationships. These theories assume power has been surrendered by one party to another (Kuokkanen & Leino-Kilpi, 2000; Trus et al., 2012). Hence, empowerment from the critical social and emancipatory theory perspectives is concerned with addressing power imbalances and improving the living conditions of oppressed groups, including racial minority groups, females and patients receiving healthcare services (Kuokkanen & Leino-Kilpi, 2000). This applies to the nursing profession, as nurses have also been identified as an oppressed group due to their lower status when compared to physicians (Manojlovich, 2007). In a qualitative study that used the work of Freire (1972) and Habermas (1971, 1979), Fulton (1997) explored the concept of empowerment with nurses and identified four emerging themes that shed further light on the structure of relationships in healthcare environments including, "empowerment," "having personal power," "relationships within the multidisciplinary team," "and feeling right about oneself." On the other hand, feminist theory addresses gender-based systematic inequalities (Chinn & Wheeler, 1985). Rao's (2012) concept analysis of empowerment indicated that nursing empowerment papers grounded in this

philosophical approach have focused predominantly on gender issues related to patient care rather than nursing professional matters.

Organizational and management theory. Since the 1980's, organizational and management theories such as Kanter's (1977, 1993) structural empowerment theory have been used to frame nursing research work focused on empowering nursing staff during financial and workforce shortages (Rao, 2012; Trus, et al., 2012). Kanter's (1977, 1993) theory centered on the structure of organizations that results in employee empowerment, rather than the qualities that individuals possess (Kuokkanen & Katajisto, 2003). Kanter observed that opportunity and power exist in organizations. Both components occur formally, through hierarchical position, and informally through relationships. Kanter theorized that empowerment occurs when employees have access to the information, support, resources and opportunities to successfully complete work assignments, and to learn and grow in the workplace. She argued that the manager is optimally placed to promote access to these organizational structures, which result in improved performance. Thus, Kanter's theory was a logical theoretical foundation for nursing research studies, given the restructuring of healthcare during the 1980's and 1990's (Trus et al., 2012).

Laschinger and colleagues have conducted numerous research studies testing Kanter's organizational theory of structural empowerment in hospital settings (Rao, 2012). Beginning in the mid-1990's, Laschinger and colleagues tested Kanter's (1977, 1993) theory with nursing populations, adding to the theory by connecting structural empowerment and psychological empowerment (Laschinger, Finegan, Shamian, & Wilk, 2001). Over the next 20 years, empowerment as a management strategy has been linked to positive work environments in organizations (Laschinger, Finegan, & Wilk, 2009). Laschinger and colleagues also examined relationships among staff nurses and managers

and reported the positive effects of empowerment on reducing burnout (Laschinger, Finegan, Shamian, & Wilk, 2003), decreased job strain (Laschinger, Finegan, & Shamian, 2001), and increased job satisfaction and work effectiveness (Laschinger & Havens, 1996).

Social and psychological theory. Building on the conceptualization of empowerment as a management construct in the 1980s, social psychological theories explained empowerment by looking at the ways individuals perceive their work and role in the organization (Amundsen & Martinsen 2014a). Conger and Kanungo (1988), Thomas and Velthouse (1990), and Spretizer's (1995) works are examples of this theoretical approach. Conger and Kanungo (1988) leveraged psychology theory and argued that while organizational structures are important, they are ineffective if employees lack self-efficacy. Empowerment from a psychological perspective was defined by these researchers as a "process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness, and through their removal by both formal organizational practices and informal techniques of providing efficacy information" (Conger & Kanungo, 1988, p. 474).

Viewed this way, empowerment is a psychological motivational construct; one that enables employees through a heightened sense of self-efficacy. Autonomous, highly skilled and knowledgeable workers require enhanced self-efficacy in performing their roles, making decisions, and coordinating care in an everchanging interprofessional team environment (Amundsen & Martinsen, 2014b; Montani, Courcy, Giorgi, & Boilard, 2015). Thus, Conger and Kanungo's (1988) definition of empowerment as a "process whereby an individual's belief in his or her self-efficacy is enhanced" (p. 474) makes

sense when applied to nurses working in the current healthcare environment, who must make decisions and access resources in response to patients' changing conditions. Building on Bandura's (1977) self-efficacy theory, Conger and Kanungo (1988) proposed a theory that views empowerment as an individual motivational construct. Leader behaviours are integral to Conger and Kanungo's theory as they provide the sources of information that enhance employee self-efficacy.

Theoretical Foundations of Leader Empowering Behaviour

This section provides an overview of the theoretical underpinnings for Hui's (1994) Leader Empowering Behaviour, beginning with Bandura's (1977) self-efficacy theory. This is followed by Conger and Kanungo's Process Model of Empowerment as the foundations for Hui's Leader Empowering Behaviour.

Bandura's (1977) self-efficacy theory. Bandura's (1977) seminal work on self-efficacy explained how individuals manage their functioning and exercise control over situations that impact their lives. Bandura (1977) identified two components of self-efficacy theory: self-efficacy and outcome expectations (Figure 2.1). He argued that individuals may believe that a behaviour will result in a specific outcome; however, they may not believe that they can perform the behaviour to achieve that outcome. Thus, Bandura (1977) defined efficacy expectation as "…the conviction that one can successfully execute the behaviour required to produce the outcomes," and outcome expectation "…as a person's estimate that a given behaviour will lead to certain outcomes." (p.193).

Grounded in the belief that humans have the power to achieve desired outcomes because of their actions, Bandura claimed that self-efficacy beliefs influence the ways that individuals think about themselves, and their ability to motivate themselves. Self-

efficacious individuals demonstrate perseverance when faced with challenging situations and have improved mental health status and are able to make important life decisions (Benight & Bandura, 2004). Several meta-analyses have been conducted to determine self-efficacy effect size. Using a variety of designs and methodologies, these studies have shown that efficacy beliefs are a significant contributor to our ability to successfully complete a task or approach a goal or challenge (Stajkovic & Luthans, 1998). Lee (1984) and Joe, Flynn, Broome and Simpson (2007) found that efficacy expectations are a better indicator of future performance than outcome expectations.

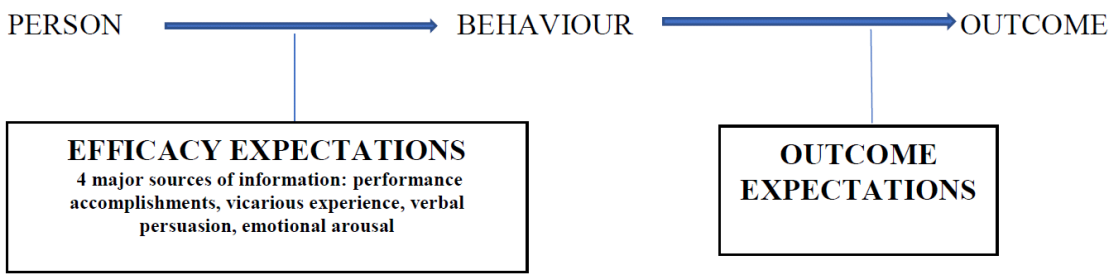

Figure 2.1. Bandura (1977) Self-Efficacy Theoretical Model

The primary assumption underlying Bandura's theory is that humans are constantly processing information and thinking about how their behaviour impacts outcomes (Bandura, 1977). Bandura uses the terms personal efficacy and self-efficacy interchangeably in his work and has identified four major sources of information and modes of induction that result in efficacy expectations (Figure 2.1): (a) p*erformance accomplishments or mastery*, experienced through participant modeling, performance desensitization, performance exposure, or self-instructed performance; (b) v*icarious experience*, as a result of live modeling, or symbolic modeling; (c) v*erbal persuasion*, due to suggestion, exhortation, self-instruction, or interpretative treatments; and (d)

emotional arousal, experienced through attribution, relaxation, biofeedback, symbolic desensitization, or symbolic exposure, that is manifested through pain or emotions such as anxiety. In a later work, Bandura (1997) referred to *emotional arousal* as *physiological and affective states.* As described below, tapping into the four major sources of information is a visible, tangible way leaders can enhance employee self-efficacy in both Conger and Kanungo's (1998) and Hui's (1994) works.

Conger and Kanungo's (1988) process model of empowerment. Conger and Kanungo (1988) challenged previous organizational and management views of empowerment for ignoring psychology theory and argued that self-efficacy theory (Bandura, 1977), plays an important role in motivating and ultimately empowering employees. Conger and Kanungo argued that employee access to organizational structures is futile in the absence of self-efficacy. An individual may have access to resources, information, support and opportunities; however, they must also believe they can successfully complete a task, goal or challenge using those organizational structures. Further, employees must perceive that access to formal power and authority increases their self-efficacy; an outcome that can be achieved through informal management behaviours (Conger & Kanungo). Amundsen and Martinsen (2014a) reinforced the idea that empowering leadership is necessary in work environments where there is a transfer of power from leadership to knowledge workers. This applies in the current hospital environment, where staff nurses with high autonomy, must initiate and make decisions about care delivery 24 hours a day, seven days a week (Amundsen & Martinsen, 2014b).

Conger and Kanungo (1988) defined empowerment "as a process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness and through their removal both by formal

organizational practices and informal techniques of providing self-efficacy information" (pg. 474). Given the roots of Conger and Kanungo's (1988) theory in self-determination or belief in personal self-efficacy, it is not surprising that Bandura's (1977) self-efficacy theory formed the foundation of their Process Model of Empowerment (Figure 2.2). In the first stage, the conditions that lead to feelings of powerlessness must be identified. These may include major organizational changes such as restructuring, poor communication practices, authoritarian leadership styles, and unfair or arbitrary reward systems. In the second stage, Conger and Kanungo (1988) claimed managerial strategies or techniques strengthen the individual's self-determination or self-efficacy and increase the employee's power. Four empowering leadership practices were identified: (a) conveying confidence in employees; (b) fostering participation in decision-making; (c) promoting autonomy by minimizing organizational barriers; and (d) setting motivational or important goals. The purpose of these practices is to remove some of the external causes of powerlessness and provide self-efficacy information for the third stage via Bandura's (1977, 1997) four informational sources: performance accomplishments or mastery, vicarious experience, verbal persuasion, and emotional arousal or physiological and affective states. Upon receipt of this information, subordinates experience empowerment as a result of increased self-efficacy (stage 4) that is manifest in stage 5, when subordinates demonstrate initiative and persistent behaviours to accomplish tasks (Conger & Kanungo, 1988).

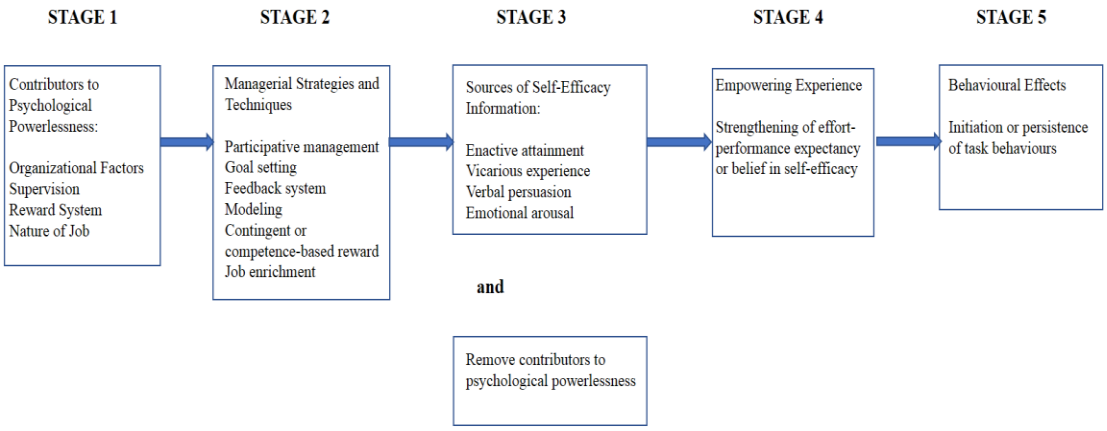

Figure 2.1. Conger and Kanungo (1988) Process Model of Empowerment

In the hospital setting, nurse leaders are optimally placed at the unit level to employ Bandura's (1977) informational sources to enhance staff nurse self-efficacy in the workplace. When staff nurses observe the nurse leader providing opportunities for staff to express their opinions (vicarious experience), showing confidence in their ability to do a good job and encouraging them to make important decisions that are directly related to their jobs (verbal persuasion), and demonstrating support during challenging situations (emotional arousal or physiological and affective states), the staff nurses' self-efficacy concerning their effectiveness in their work environment can increase, which has the potential to positively influence nurse and patient outcomes.

Based on Conger and Kanungo's (1988) conceptualization of empowerment, Thomas and Velthouse (1990) claimed that empowerment has many facets (Browning, 2013). Thomas and Velthouse created a model that identified four psychological empowerment cognitions that are indicators of employee motivation: impact, competence, meaningfulness and choice. With the advent of globalization and change in workplaces requiring employee initiative and creative thinking, Spreitzer (1995) built on

Thomas and Velthouse's work by exploring psychological empowerment in the workplace setting. Spreitzer identified antecedents of psychological empowerment as self-esteem, access to information (mission and performance) and rewards. Although there was strong theoretical support for locus of control as an antecedent, this was not confirmed in Spreitzer's (1995) study because the measure of locus of control was unreliable. However, relationships between empowerment and innovative behaviours and managerial effectiveness were both significant and identified as consequences of psychological empowerment.

Laschinger, Finegan, and Wilk (2001) found that psychological empowerment had a positive impact on staff nurses' job satisfaction. In a later study, Boudrias, Gaudreau, and Laschinger (2004) recommended further testing of Spreitzer's (1995) instrument to determine whether the empowerment construct differs between men and women. These researchers claimed invariance across male and female groups yet reported that the male nurse data was a better fit to the data than the female data. Given that nursing populations are largely female, it is important to understand any differences for male and female populations and make instrument adjustments accordingly. Cheong et al. (2019) cautions differences in empowerment may also occur as a result of leader gender. Relational oriented leadership styles and characteristics such as warmth, friendliness, and participative decision-making have been associated with successful, effective female leaders rather than male leaders (Cheong, et al., 2019). Thus, the impact of leader gender must also be considered. Laschinger, Purdy, and Almost (2007) went on to examine the impact of leadership style (quality of leader-member exchange) on nurse manager psychological and structural empowerment. These researchers reported that higher quality relationships between managers and their supervisors enhanced mangers'

psychological and structural empowerment, as well as their job satisfaction (Laschinger et al., 2007). More recently, Dahinten, Lee and MacPhee (2016) confirmed an increase in nurses' job satisfaction when structural empowerment, LEB and psychological empowerment co-exist. Structural empowerment was the strongest predictor, followed by LEB and psychological empowerment. In their report, Dahinten and colleagues emphasized the importance of providing staff nurses with the information, resources, support, and opportunities they need to achieve organizational goals, as well as decentralizing decision-making processes.

Hui (1994) leader empowering behaviours. Leader Empowering Behaviour (LEB) described by Hui (1994) constitutes an empowering leadership style, defined as "behaviours that share power with subordinates" (Vecchio, Justin & Pearce, 2010, p. 531). Shared power occurs when leaders delegate responsibility and authority to employees who are competent to make decisions at the level of the organization where business occurs (Amundsen & Martinsen, 2014a). LEB theory differs from other leadership theories because its roots lie in self-efficacy theory and is conceptualized as a motivational construct (Amundsen & Martinsen, 2014b; Conger & Kanungo, 1988).

Conger and Kanungo (1988) identified four LEB: expressing confidence in followers and having high performance expectations; fostering opportunities for participation in decision-making; providing autonomy from bureaucratic constraints; and setting inspirational and/or meaningful goals. Building on Conger and Kanungo's (1988) work, Hui (1994) reviewed the literature, and identified and defined five LEB. Hui's (1994) LEB incorporated minor wording changes and an additional fifth LEB that addressed goal accomplishment. Hui (1994) theorized that when leaders help employees understand the importance of their work, involve employees with decision-making,

promote ongoing education and training opportunities to facilitate goal accomplishment, recognize and express confidence in employees, and enable employees to initiate and perform their roles in an effective and efficient manner, such experiences enhance employee self-efficacy and promote the sharing of power between leader and employee. These experiences are facilitated through the leader's use of Bandura's (1977) sources of information. When leaders promote vicarious experiences for employees through visible and supportive interactions with staff, use verbal persuasion to encourage and share staff member accomplishments, and act as mentors and coaches, these experiences increase employees' self-efficacy and improve outcomes (Manojlovich, 2005).

Hui (1994) identified five Leader Empowering Behaviours (LEB): enhancing the meaningfulness of work, fostering participation in decision-making, expressing confidence in high performance, facilitating goal accomplishment, and providing autonomy from bureaucratic constraints. *Enhancing the meaningfulness of work* refers to leader behaviours that provide purpose and meaning to followers' work. This LEB results in employees identifying themselves as important members of the organization and thus they are motivated to perform their tasks and understand the importance of their roles in and contributions to the organization. *Fostering participation in decision-making* means the leader solicits inputs from followers in problem situations and induces the active involvement from followers in decision-making processes. Creating opportunities for followers to express their job-related opinions and making decisions together with the followers enhances employee self-efficacy and their sense of empowerment.

E*xpressing confidence in high performance* comprises leader behaviours that cultivate the confidence of, as well as showing confidence in, the follower's ability to perform at a high level (Hui, 1994). This includes recognizing the accomplishments of

the followers and conveying to followers that they can fulfill the leader's expectations. *Facilitating goal accomplishment* is aimed at maximizing the likelihood that followers may achieve their performance goals by enhancing the skills of the followers and providing resources required for effective performance (Hui, 1994). This includes training followers in their areas of deficiencies, providing necessary resources, and removing obstacles to performance. Last, p*roviding autonomy from bureaucratic constraints* is aimed at minimizing administrative details and rule mindedness so that followers can initiate task behaviours and perform their jobs with effectiveness and efficiency. This includes simplifying organizational rules and procedures, reducing command levels, and encouraging followers to find ways to achieve their performance goals (Hui, 1994).

Following the identification of the five LEB, Hui (1994) created a measurement instrument to operationalize the LEB concept and measure employee perceptions of their leader's empowering behaviours. Bandura's (1977) major sources of information that enhance self-efficacy (performance accomplishments or mastery, vicarious experience, verbal persuasion, and emotional arousal) are integral to Hui's LEB definitions and measurement instrument. To illustrate, for the *expressing confidence in high performance* LEB, an item states the leader "always shows confidence in my ability to do a good job*."* Here, the leader's demonstration of verbal persuasion through encouragement, support and advice, as well as performance accomplishments or mastery, whereby the leader orchestrates experiences for the employee to perform a new skill, are ways that the leader enhances the employee's sense of self-efficacy and motivation to perform. Using the LEB instrument in his research, Hui (1994) identified direct and indirect effects of LEB

on employee performance. The indirect or mediated effects were through empowerment experiences; specifically, personal control, voice and self-efficacy.

Although few studies have tested the relationship between LEB and self-efficacy related to work effectiveness, a small number have examined the impact of LEB on nursing outcomes using Hui's (1994) measurement tool. In a large cross-sectional US and Canadian study of 1,973 pediatric intensive care nurses in 65 institutions, Meyer, Bratt, Broome, Kelber, and Lostocco (2000) confirmed the positive impact of nursing leadership using Hui's instrument on staff nurse job satisfaction. These researchers concluded that management practices which empower staff to provide quality patient care are needed. Several other studies utilized Kanter's (1977, 1993) structural empowerment theory as the theoretical framework and confirmed links between LEB and nurse outcomes (Cziraki & Laschinger, 2014; Dahinten et al., 2016; Greco et al., 2006; Laschinger, Wong, McMahon, & Kaufmann, 1999; Peachey, 2002). Using Hui's instrument in a cross-sectional study of 191 full time staff nurses in three Ontario acute care teaching hospitals, Peachy (2002) in an unpublished dissertation, demonstrated that LEB was significantly related to workplace empowerment, psychological empowerment, and organizational commitment. Findings of Greco et al.'s (2006) cross-sectional study of 500 staff nurses in Ontario acute care hospitals, showed that LEB can enhance person-job fit and increase work engagement. Results highlighted the important role that leader behaviours play in creating healthy workplaces that address unreasonable workloads, control over work, acknowledge staff nurses' contributions, and promote healthy relationships, fairness, and alignment between employee and organizational values. More recently, Dahinten et al., (2016) concluded that nurses' job satisfaction is influenced greatly by their access to empowering structures within organizations; specifically, LEB,

structural empowerment and psychological empowerment. Finally, Cziraki and Laschinger's (2014) analysis of data collected from 322 Ontario nurses confirmed that structural empowerment mediated the relationship between LEB and work engagement.

Conger and Kanungo's (1988) *Process Model of Empowerment* provides a theoretical framework to test the motivational relationship between manager LEB and staff nurse self-efficacy. Given the positive impact of LEB on job satisfaction, workplace empowerment, psychological empowerment, organizational commitment, and work engagement (Cziraki & Laschinger, 2014; Dahinten, Lee, & MacPhee, 2016; Greco et al., 2006; Laschinger et al., 1999; Meyer-Bratt et al., 2000; Peachy, 2002), it is reasonable to predict that LEB influences staff nurse self-efficacy. When leaders provide purpose and meaning to staff nurses' work, create opportunities for staff nurses to be involved with decision-making, support staff nurse performance through the provision of resources, acknowledge high performance, and create environments that optimize effectiveness and efficiency, such behaviours could positively influence staff nurse self-efficacy in the workplace.

Importance of Leader Empowering Behaviour in 21st Century Healthcare

Considering the important role that registered nurses play as autonomous knowledge workers in today's healthcare environment, empowerment of staff nurses through enhanced self-efficacy is paramount (Amundsen & Martinsen, 2014b; Kretzchmer et al., 2017). Nurses at the point of care must access resources and act when patient needs fluctuate by day and night; they must also be involved in decision-making concerning their work environments (Amundsen & Martinsen 2014a; Cummings et al., 2018; Dahinten et al., 2016; Manojlovich, 2005). Managers who empower their nursing staff can expect to improve nursing and patient outcomes such as increased job

satisfaction, decreased burnout and depersonalization, and decreased patient mortality and morbidity (Dahinten et al., 2016; Kretzchmer et al., 2017; Manojlovich, 2007). In this section of the paper we discuss how Hui's (1994) LEB can be operationalized by nurse managers to optimize both nurse and patient outcomes. This is followed by a discussion concerning the role of LEB in promoting collaborative team environments.

Operationalization of leader empowering behaviour by nurse managers.

Enhancing the meaningfulness of work can be enacted during interactions with nursing staff (Hui, 1994). When the nurse manager links routine unit practices to organizational change, research evidence or best practices, this brings purpose and meaning, and motivates nurses to continue to perform their nursing work (Dahinten, Lee, & MacPhee, 2016; Havens, Warshawsky, & Vasey, 2013; Lake, 2002). Interactions between managers and staff may occur at the individual or unit level during daily rounds, performance reviews, staff meetings, unit councils or huddles. These forums provide the manager with opportunities to model, use verbal persuasion and offer support to nursing staff with the goal of enhancing nurses' self-efficacy in the workplace (Bandura, 1977; Dahinten et al., 2016; Manojlovich, 2005). These settings also provide the opportunity to foster participation in decision-making (Hui, 1994). Integral to LEB is the notion that nurses are engaged in idea generation, problem solving and decision-making with their manager. Short term task forces may also be required to address large, complex issues, providing the manager with greater opportunities to convey sources of information to nurses (Bandura, 1977; Havens, Warshawsky, & Vasey 2013). Engaging staff in decision-making aligns with research findings linking Magnet hospital characteristics, such as nurse's perceptions of autonomy and control over their practice environments, to workplace empowerment (Kretzchmer et al., 2017). The Magnet recognition program,

introduced in 1990 by the American Nurses Credentialing Center (ANCC), recognizes hospitals that promote healthy work environments and recruit and retain nursing staff who deliver high quality care (Lasater, Richards, Dandapani, Burns, & McHugh, 2019). Hospitals are awarded Magnet status following an ANCC assessment of structures and processes that contribute to empirical outcomes, as well as four other components: structural empowerment, transformational leadership, new knowledge, innovations and improvements, and exemplary professional practice (ANCC, 2019).

Other strategies to operationalize LEB include conducting performance reviews with nurses; these meetings are an opportune time for managers to facilitate goal accomplishment (Hui, 1994). Formal meetings to monitor and provide feedback on current performance enables the manager to identify and facilitate access to resources for effective performance (Germain & Cummings, 2010). This may include access to organizational courses and experts or alternatively attendance at conferences. In addition, intermittent, informal coaching and mentoring interactions may occur throughout the year to identify and overcome barriers to performance. Acknowledgement of staff's abilities and accomplishments during performance reviews is one way to express confidence in high performance (Hui, 1994). More overt strategies to operationalize this LEB include praising individual and team efforts during staff meetings or huddles, in unit, program or organizational newsletters and during quality presentations to senior leaders in the organization. Verbal persuasion and emotional or psychological arousal as sources of information can be employed to support staff. For example, a manager can use verbal persuasion to encourage staff who are practising new skills. During challenging situations such as a patient interaction or cardiac arrest, a manager may intervene or offer debriefing to staff after the event to support and assist them to manage related anxiety

(Bandura, 1977; Manojlovich, 2005). The provision of autonomy from bureaucratic constraints is the last LEB that focuses on minimizing details and rules so that nurses can initiate and perform nursing work effectively and efficiently (Hui, 1994). Here, nurse managers may work with nursing staff to examine workflows, eliminating unnecessary steps and supporting decision-making by nurses closest to the point of care (Amundsen &Martinsen, 2014a; Dahinten, Lee & MacPhee, 2016; Meyer-Bratt et al., 2000).

Role of leader empowering behaviours in promoting collaborative team environments. Research has demonstrated the relationships between collaborative environments and supportive management practices and improved staff nurse outcomes (Kretzchmer et al., 2017; Schmalenberg & Kramer, 2008; WHO, 2010). Thus, empowering leader behaviours that promote self-efficacy and foster collaborative interprofessional team environments should be of interest to healthcare leaders and researchers alike. Not surprisingly, leaders who create empowering work environments also foster collaborative relationships between healthcare professionals (Friend & Sieloff, 2018; Shirey, 2010). In a cross-sectional study of new graduate nurses, relational leadership practices and structural empowerment were identified as important positive predictors in promoting interprofessional collaboration (Laschinger & Smith, 2013). Building on this evidence, Regan, Laschinger, and Wong (2016) analyzed data from a cross-sectional study of experienced staff nurses in Ontario and concluded that authentic leadership, structural empowerment, and a professional practice milieu promote interprofessional collaboration. Visible, accessible managers who model interprofessional collaboration have been linked to increased interprofessional collaboration in new graduate nurse populations (Anderson, Linden, Allen, & Gibbs, 2009; Pfaff, Baxter, Ploeg, & Jack, 2014). As well, interprofessional training has been linked to an increased

sense of self-efficacy among students from nursing, medicine, physiotherapy, occupational therapy, laboratory technology and radiology (Norgaard et al., 2013).

A workplace culture that supports interprofessional collaboration is a critical enabler of promoting collaboration and effective patient care (Orchard et al., 2005). Factors that contribute to a culture of collaboration include teamwork, effective communication, and positive relationships among professionals (Crawford, Omery, & Seago, 2012). On a practical level, culture is influenced by communication patterns, conflict resolution, and shared decision-making processes (WHO, 2010). Nursing and non-nursing leaders are optimally placed at the unit level to promote interprofessional collaboration and role model collaborative behaviours, such as communication, collaboration, trust, respect for professionals and their professional ethical standards, as well as facilitating participation in decision-making (Kretzchmer et al., 2017; Regan, Laschinger, & Wong, 2016).

The previous studies point to the positive effects of collaborative and supportive management practices on interprofessional teams; however, there is a gap in the literature concerning the impact of LEB on interprofessional collaboration. Based on previous evidence, it is reasonable to expect that leaders who demonstrate LEB by enhancing the meaningfulness of work, fostering participation in decision-making, facilitating goal accomplishment, expressing confidence in high performance, and providing autonomy from bureaucratic constraints (Hui, 1994), could create the conditions for interprofessional collaboration. It is also conceivable that LEB positively impacts interprofessional collaboration through self-efficacy. Nurses who are involved in decision-making and acknowledged for their contributions to the workplace and patient care might experience enhanced self-efficacy because of their leader's LEB. They may

feel more confident and effective in their roles which in turn positively influences their interactions with interprofessional team members and hence, their perceptions of interprofessional collaboration. Greater understanding and valuing of other professionals' roles may occur as the nurse manager models positive interactions with team members and respect for their professional standards of practice. Together, this could result in enhanced staff nurses' perceptions concerning collaboration in providing patient care. Exploration of the direct and the indirect relationships between LEB and interprofessional collaboration through self-efficacy will enhance our understanding of the motivational effects of empowering behaviour and reinforce the importance of such behaviours by leaders.

In sum, operationalization of LEB by the nurse manager is important in the current healthcare environment. These behaviours promote interprofessional collaboration, an important strategy and goal for optimizing patient outcomes and decreasing duplication and gaps in service. Leader empowering behaviours, through the provision of education and training, also enhance employee self-efficacy, thereby increasing motivation and higher performance. Demonstration of LEB by the nurse manager supports the notion of knowledge workers described by Amundsen and Martinsen (2014a) and promotes increased power-sharing and decision-making at the patient care level. Last, LEB are concrete behaviours aimed at mitigating employees' perceptions of powerlessness in the organization (Conger & Kanungo, 1988).

Previous research has identified the importance of leadership in creating interprofessional collaborative environments, and the role of nursing leaders in influencing the culture and expectations for interprofessional collaboration (Laschinger & Smith, 2013; Shirey, 2010). The nurse manager who demonstrates LEB reinforces the

value of staff nurses' work and illustrates how the staff nurse role relates and complements the work of other professionals to achieve established goals (Kretzchmer, 2017). Involvement of staff nurses in team decision-making may enhance staff nurse self-efficacy related to their effectiveness in the workplace, and their perceptions of collaboration among team members. The nurse manager is well placed at the unit level to create the conditions for interprofessional collaboration by modeling collaborative behaviours and establishing unit processes that foster healthy working relationships among all professions. Gaps in the literature include the impact of LEB on experienced staff nurse self-efficacy and interprofessional collaboration. Given the numerous benefits of interprofessional collaboration to patient care and safety, and its positive impact on healthcare professional retention, it is important to examine the relationships between LEB and interprofessional collaboration, directly and indirectly through self-efficacy since it could shed important light on how leaders can influence staff nurse interprofessional collaboration in their work environments. Based on previous research, we propose that higher levels of LEB enhance staff nurse interprofessional collaboration directly, and indirectly through self-efficacy.

Conclusion

Empowerment has been ascribed a variety of meanings and definitions by various disciplines over the past century. Many research studies in the nursing literature examining empowerment have used organizational theory as the theoretical foundation; specifically, Kanter's (1977, 1993) theory of structural empowerment. The importance of structural empowerment in the workplace has been established in the literature; however, the underlying individual motivational processes of empowerment are not well understood (Montani, Courcy, Giorgi & Boilard, 2015). Given that nurses are knowledge

workers and must be empowered in their work, we argue that empowerment through enhanced self-efficacy is an important mechanism to study in the current healthcare environment. Conger and Kanungo's (1988) and Hui's (1994) work provide the means to test relationships between Leader Empowering Behaviour, staff, patient, and unit outcomes. Such research may also enhance our understanding of the motivational mechanisms for staff nurse empowerment in the workplace through self-efficacy.

Previous evidence underscores the importance of collaborative practice environments and their relationship to improved staff, patient and unit outcomes. Nurse managers at the unit level play a critical role in creating environments that support and promote healthy working relationships among all professionals. When leaders demonstrate LEB, these positive behaviours influence and reinforce the value and contributions of each profession and how each team member contributes to improved patient, unit and organizational outcomes. As nursing roles and models of care continue to evolve in the 21st century, LEB will likely be a mainstay in the nurse manager's toolkit.

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CHAPTER III: PSYCHOMETRIC ASSESSMENT OF HUI'S (1994) 16-ITEM LEADER EMPOWERING BEHAVIOUR SCALE

Introduction

Leader empowering behaviour (LEB) has gained increasing interest over the past four decades as organizations have sought ways to increase employee motivation and work achievements (Cheong, Yammarino, Dionne, Spain, & Tsai, 2019). Described as a process for sharing power with employees, LEB scholars claim that employee and organization outcomes are enhanced as a result of specific leader behaviours (Ahearne, Mathieu, & Rapp, 2005; Amundsen & Martinsen, 2014; Arnold, Arad, Rhoades, & Drasgrow, 2000; Cheong et al., 2019). In the healthcare arena, understanding the impact of LEB on nursing staff empowerment, and other nursing and patient outcomes is important as registered nurses are closest to the point of care. They must be empowered to access resources and make decisions in response to patients' changing conditions at all times of the day and night (Manojlovich, 2007).

Understanding the impact of LEB on nursing and patient outcomes requires rigorous research to inform strategies that support point of care nursing staff. High-quality evidence depends on the use of reliable and valid instruments; such scales consistently measure and reflect what is known about a concept, including its complexity and structure (Fain, 2017). In the empowering leadership literature, several instruments have been developed to measure the LEB concept (Lee, Willis, & Tian, 2018) including instruments developed by Arnold et al., (2000), Ahearne et al., (2005), and Konczak et al., (2000). In the nursing literature, the LEB instrument designed by Hui (1994) has been used by various nursing scholars (Dahinten et al., 2014; Greco, Laschinger, & Wong, 2006; Laschinger, Wong, McMahon, & Kaufmann, 1999; Meyer-Bratt, Broome, Kelber,

& Lostocco, 2000). The purpose of this paper is to test and describe the psychometric properties of Hui's (1994) 16-item version of the LEB scale and assess the suitability of this shortened instrument for use in future nursing research studies. In this paper, Hui's (1994) and Ahearne et al.'s, (2005) LEB scales are described and compared as two sound measures derived from Conger and Kanungo's (1988) *Process Model of Empowerment*. Hui's original scale to measure LEB consisted of 27 items that he then condensed to 16-items. Although nursing researchers have used Hui's 27-item scale there are advantages to using a shorter scale.

Literature Review

Despite growing interest in examining the impact of empowering leader behaviour on employee outcomes, there is a lack of consensus as to which leader behaviours should be included and measured (Cheong et al., 2019). This lack of agreement among scholars has been driven by the development of two different streams of thought on the concept of empowering leadership (Cheong et al., 2019). The first stream focused on management practices, including LEB (Conger & Kanungo, 1988; Hui, 1994). Rooted in the social structures of organizations, leader behaviours and practices play a critical role in facilitating employee empowerment (Cheong et al., 2019). Leader behaviours and practices include leading by example, participative decision-making, coaching, informing, and showing individual concern (Arnold et al., (2005), as well as facilitating autonomy and development support (Amundsen & Martinsen, 2015). The second stream concentrated on individual psychological empowerment, a motivational state consisting of meaning, competence, self-determination, and impact (Spreitzer, 1995; Thomas & Velthouse, 1990). These differing perspectives have driven the creation of instruments

that capture unique aspects of empowering leader behaviours and reflect scholars' differing theoretical points of view (Cheong, et al., 2019).

This paper focuses on two instruments from the management practices stream that are grounded in Conger and Kanungo (1988) and Hui's (1994) theories and measure LEB in the workplace, and at the individual level. A review of Conger and Kanungo's (1988) *Process Model of Empowerment*, Hui's (1994) LEB instrument and comparison with Ahearne, Mathieu and Rapp's (2005) LEB instrument are provided in the next section.

Conger and Kanungo's (1988) Process Model of Empowerment

Conger and Kanungo (1988) claimed self-efficacy (Bandura, 1977) plays an important role in motivating and ultimately empowering employees. Thus, these scholars defined empowerment "as a process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness and through their removal both by formal organizational practices and informal techniques of providing self-efficacy information" (pg. 474). The roots of Conger and Kanungo's (1988) *Process Model of Empowerment* (Figure 2.2, Chapter II, p.36) can be found in Bandura's (1977) self-efficacy theory.

In the first stage of Conger and Kanungo's model, conditions creating feelings of powerlessness, such as major organizational changes, poor communication practices, authoritarian leadership styles, and unfair or arbitrary reward systems must be identified (Conger & Kanungo, 1988). In the second stage, Conger and Kanungo (1988) stated managerial strategies or techniques strengthen the individual's self-determination or self-efficacy and increase the employee's power through four empowering leadership practices: (a) conveying confidence in employees; (b) fostering participation in decision-making; (c) promoting autonomy by minimizing organizational barriers; and (d) setting

motivational or important goals. Conger and Kanungo (1988) argued these practices remove some of the external causes of powerlessness and provide self-efficacy information for the third stage. The provision of self-efficacy information is accomplished via Bandura's (1977, 1997) four informational sources: performance accomplishments or mastery, vicarious experience, verbal persuasion, and emotional arousal or physiological and affective states. In turn, subordinates experience empowerment as a result of increased self-efficacy (stage 4), which results in employees' demonstration of initiative and persistent behaviours to accomplish tasks in stage 5 (Conger & Kanungo, 1988).

Hui (1994) Leader Empowering Behaviour Instrument

Building on Conger and Kanungo's (1988) Process Model of Empowerment, Hui (1994) reviewed the literature, identified and defined five LEB, incorporating minor wording changes from Conger and Kanungo's (1988) work. Hui 's (1994) five LEB included enhancing the meaningfulness of work, fostering participation in decision-making, expressing confidence in high performance, facilitating goal accomplishment, and providing autonomy from bureaucratic constraints. The additional fifth LEB added addressed goal accomplishment. Hui (1994) stated that in order to empower employees, leaders must support employees with the necessary support and resources for goal attainment. In sum, Hui (1994) argued that when leaders employ LEB by: 1. assisting employees to understand the importance of their work; 2. engaging employees in participative decision-making; 3. supporting ongoing education and training opportunities to facilitate goal accomplishment; 4. acknowledging and expressing confidence in employees; and 5. enabling employees to initiate and perform their roles in an effective and efficient manner, such experiences enhance employee self-efficacy and promote the

sharing of power between leader and employee. This is achieved through the leader's use of Bandura's (1977) sources of information. Leaders who promote vicarious experiences for employees through visible and supportive interactions with staff, use verbal persuasion to encourage and share staff member accomplishments, and act as mentors and coaches, increase employees' self-efficacy and improve outcomes (Manojlovich, 2005).

Measure development. To develop the measure Hui (1994) employed techniques described by Schwab (1980) and Churchill (1979). First, Hui (1994) developed construct definitions for the five LEB. Items were generated based on the construct definitions and sorted using a Q-Sort method into the five LEBs by ten faculty members and senior PhD students. Items that did not fit into a LEB category were placed into an "Other" category by the faculty members and senior PhD students. A minimum of 80% agreement on the item's categorization was required for the item to remain in the final scale. Hui's (1994) LEB instrument contains items in the five subscales: enhancing the meaningfulness of work, fostering participation in decision-making, facilitating goal accomplishment, expressing confidence in high performance, and providing autonomy from bureaucratic constraints. A 7-point Likert scale, ranging from 1 = "Strongly Disagree" to 7 = "Strongly Agree," is used to measure participant responses. Closer examination of Hui's (1994) LEB instrument revealed links from the subscales and items in the questionnaire back to the theoretical roots of the Process Model of Empowerment described by Conger and Kanungo (Table 3.1). For example, in the *enhancing the meaningfulness of work* subscale, the item "My manager helps me to understand the purpose of my work" links back to Conger and Kanungo's managerial strategies and techniques (Participative Management and Feedback System).

In Hui's original study, analyses were conducted using data collected from 315 employees (Hui, 1994). A performance evaluation for each employee was obtained from 53 immediate supervisors, who were enrolled in one of two executive management courses held in a large American university (Hui, 1994). Matched pairs of data (i.e. completed employee leadership assessment questionnaire and supervisor performance evaluation form) were received from 269 dyads. Following missing data analysis, the sample size for analysis was 244 (Hui, 1994). Exploratory and confirmatory factor analyses of the data were conducted using the same dataset. In his unpublished dissertation, Hui (1994) indicated that the exploratory factor analysis yielded a 5-factor solution which explained 61.2% of the model's total variance ($\chi^2(226) = 439.9$, $p < .01$).

Test-retest or equivalent forms reliability testing were not reported by Hui (1994) during the scale development process; however, Cronbach alpha testing demonstrated internal consistency of the five subscales (16-item LEB scale), with acceptable values ranging from .71 to .90. Hui's 27-item LEB scale, that was tested using exploratory factor analysis techniques, has been employed in nursing research studies with consistent reliability: Laschinger et al. (1999) reported acceptable Cronbach alpha values of .77 to .95, except for the subscale autonomy from bureaucratic constraints with a value of .63; Greco et al. (2006) reported similar findings with values ranging from .64 for fostering autonomy, and from .87 to .97 for the remaining four subscales; Meyer-Bratt et al. (2000) reported Cronbach alpha values of .67 to .95 for the subscales; and MacPhee et al., (2014) reported a total LEB scale Cronbach alpha of .95. In addition, a review of the individual items reveals grammar and language appropriate for senior high school; thus, the items are at an appropriate reading level for nurses who have not completed an undergraduate degree (DeVellis, 2012).

Following the exploratory factor analysis, Hui (1994) reported the results of a confirmatory factor analysis (CFA). This analysis was conducted on a total of 44 items that included LEB (16 items with highest factor loadings) and other measures of empowerment experiences (personal control, voice, self-efficacy) and performance (in-role performance, helping, civic virtue, sportsmanship). The Chi-square result of the confirmatory factor analysis conducted by Hui was significant $\chi^2(836) = 1233.6$, $p < .05$, with acceptable Tanaka and Huba GFI index of .82 (Hui, 1994). In addition, CFI and the DELTA fit indices exceeded the minumum requirements for a good model fit to the data of .92 for each index and Hui (1994) concluded the confirmatory model was acceptable.

Hui's CFA preserved the five categories of LEB with three items in each category, except for enhancing the meaningfulness of work which contains four items, for a total of 16 items (Hui, 1994). However, minor revisions were made to five items of the 16-item LEB instrument for use in the *Authentic Leadership for New Graduate Nurse Success* study by Laschinger, Wong, Finegan and Fida (2015). Data from this study were used for the CFA results reported in this paper. The revisions simplified and clarified items, thereby enhancing face validity. In addition, all items in the revised version of the instrument were positively worded statements to minimize measurement error and erroneous study findings (DeVellis, 2012; Konczak, Stelly, & Trusty, 2000). In the *enhancing the meaningfulness of work* subscale, "Helps me understand the importance of my work to the overall effectiveness of my organization" was changed to "Helps me understand the importance of my work." Also, in this subscale "Helps me understand the purpose of what I do at work" was reworded to "Helps me understand the purpose of my work." In the *participation in decision-making* subscale, the item "My leader often consults me on issues pertaining to work" was reworded to "My leader often consults me

on work issues." A second item in this subscale "Makes many decisions together with me" was slightly reworded to "Makes many decisions with me." One item in the *fostering autonomy from bureaucratic constraints* subscale was reworded from "My leader encourages me to cut through the bureaucracy to get things done" to "My leader encourages me to make decisions that are directly related to my job." This change in wording reflects how the registered nurse functions in the current healthcare environment, directly working with patients and access to resources within the unit, rather than navigating organizational structures and processes to secure resources, as the word bureaucracy suggests. As a consequence of this change, it is likely that this item will be more readily understood by nurses completing research study questionnaires. Table 3.2 provides a summary of the items included in the original 27-item and revised 16-item versions of Hui's (1994) LEB instrument. A visual display of Hui's (1994) 16-item, 5-factor model can be viewed in Figure 3.1.

Comparison with Ahearne, Mathieu and Rapp (2005) LEB Instrument

Another LEB measure was developed by Ahearne, Mathieu, and Rapp (2005). As with Hui's tool, it has been used frequently in research related to empowering leadership (Lee et al., 2018). The content of the Ahearne et al. (2005) LEB instrument is consistent with the LEB construct as it focuses on leader behaviours in alignment with both Conger and Kanungo's and Hui's (1994) works. Subscales reflect the majority of Hui's LEB categories including enhancing the meaningfulness of work, fostering participation in decision-making, expressing confidence in high performance, and providing autonomy from bureaucratic constraints. Notably, facilitating goal accomplishment is missing from this instrument. This may be explained by Ahearne and colleagues' primary interest in the psychological aspects of empowerment and examination of the relationships between

LEB and self-efficacy, adaptability and employee readiness, rather than how LEB influences organizational outcomes.

Table 3.1

Subscales of the revised 16 item LEB scale (Hui, 1994) with links to Conger and Kanungo (1988) Process Model of Empowerment

Subscale	Item Number and Descriptor	Links to Conger and Kanungo Theory - Managerial Strategies and Techniques
Enhancing the meaningfulness of work	LEB1. Helps me understand the importance of my work.	Feedback System; Job Enrichment
	LEB2. Helps me understand how my work fits into "the bigger picture."	
	LEB3. Helps me understand how the objectives and goals of my nursing unit relate to that of the entire organization.	
	LEB4. Helps me understand the purpose of my work.	
Fostering participation in decision-making	LEB5. Provides many opportunities for me to express my opinions.	Participative Management; Feedback System
	LEB6. Often consults me on work issues.	
	LEB7. Makes many decisions with me.	
Expressing confidence in high performance	LEB8. Always shows confidence in my ability to do a good job.	Contingent or competence-based reward; Feedback System; Modeling; Job Enrichment
	LEB9. Believes that I can handle demanding tasks.	
	LEB10. Believes in my ability to improve even when I make mistakes.	
Facilitating goal accomplishment	LEB11. Helps me overcome obstacles to my performance.	Goal Setting; Job Enrichment
	LEB12. Helps me to identify what I need in order to achieve my performance goals.	
	LEB13. Always makes sure that I have the resources needed for effective performance.	
Providing autonomy from bureaucratic constraints	LEB14. Makes it more efficient to do my job by keeping the rules and regulations simple.	Participative Management; Modeling; Job Enrichment
	LEB15. Allows me to do my job my way.	
	LEB16. Encourages me to make important decisions that are directly related to my job.	

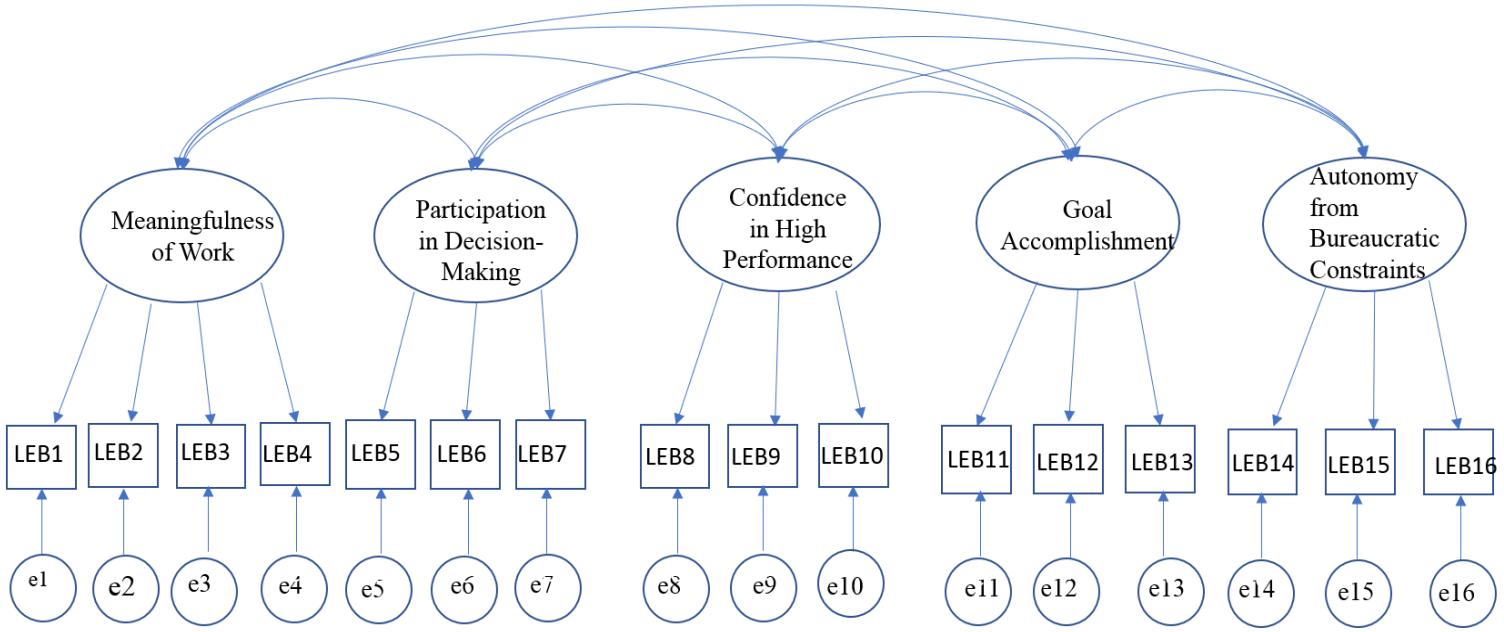

Figure 3.1. Hui (1994) Five-Factor Model. A complete list of LEB item notations can be found in Table 3.2.

Table 3.2

Items Included in the 27-Item and 16-Item Versions of Hui's (1994) LEB Instrument

Scale	Hui (1994) 27-item LEB Scale	Hui's (1994) 16-item LEB Scale
LEB Subscale	Item stem: My leader….	Item stem: My manager…..
Enhancing the meaningfulness of work	LEB1. Helps me understand the importance of my work to the overall effectiveness of my organization LEB2. Helps me understand how my job fits into "the bigger picture" LEB3. Helps me understand how the objectives and goals of my nursing unit relate to that of the entire organization LEB4.Helps me realize that I am part of a larger team LEB5. Helps me understand the purpose of what I do at work LEB6. My leader makes me believe that my work can "make a difference" in this organization	LEB1. Helps me understand the importance of my work LEB2. Helps me understand how my work fits into "the bigger picture" LEB3. Helps me understand how the objectives and goals of my nursing unit relate to that of the entire organization LEB4. Helps me understand the purpose of my work
Fostering participation in decision-making	LEB7. Provides many opportunities for me to express my opinions LEB8. Often consults me on issues pertaining to work LEB9. Encourages me to take the initiative in expressing my job-related opinions LEB10. Makes many decisions together with me LEB11. Encourages me to make important decisions that are directly related to my job	LEB5. Provides many opportunities for me to express my opinions LEB6. Often consults me on work issues LEB7. Makes many decisions with me
Expressing confidence in high performance	LEB12. Recognizes my good work by using it as an example for others LEB13. Always shows confidence in my ability to do a good job LEB14. Believes that I can handle demanding tasks LEB15. Focuses on my successes rather than my failures LEB16. Believes in my ability to improve even when I make mistakes	LEB8. Always shows confidence in my ability to do a good job LEB9. Believes that I can handle demanding tasks LEB10. Believes in my ability to improve even when I make mistakes
Facilitating goal accomplishment	LEB17. Helps me to overcome obstacles to my performance LEB18. Helps me to identify what I need in order to achieve my performance goals LEB19. Provides the opportunity for training so that I can perform effectively LEB20. Always makes sure that I have the resources needed for effective performance LEB21. Helps to develop good working relationships with those people who can affect my performance LEB22. Takes a "sink or swim" attitude toward the difficulties that arise in my work	LEB11. Helps me overcome obstacles to my performance LEB12. Helps me to identify what I need in order to achieve my performance goals LEB13. Always makes sure that I have the resources needed for effective performance
Providing autonomy from bureaucratic constraints	LEB23. Encourages me to contact directly the people from whom I need information LEB24. Makes it more efficient to do my job by keeping the rules and regulations simple LEB25. Insists that I rigidly follow rules and procedures even when they interfere with my performance LEB26.Allows me to do my job my way LEB27. Encourages me to cut through bureaucracy to get things done	LEB14. Makes it more efficient to do my job by keeping the rules and regulations simple LEB15. Allows me to do my job my way LEB16. Encourages me to make important decisions that are directly related to my job

Ahearne et al.'s (2005) LEB instrument was created following a broad literature search and qualitative interviews with American sales representatives from the health division of a pharmaceutical company and sales managers. Interviews were taped and transcribed, followed by qualitative content analysis procedures (Ahearne et al., 2005). The instrument was revised to ensure applicability to the sales representatives' setting and then was tested with six managers and representatives, together with two experts in the field of pharmaceuticals. Following these testing procedures, Ahearne and colleagues (2005) made minor wording adjustments to the instrument prior to administering to a new study sample of sales representatives. This was part of a larger pilot study that examined the effect of LEB on customer satisfaction and performance. Although Cronbach alpha values were calculated for four subscales, when the instrument was tested using an unrestricted maximum-likelihood exploratory factor analysis, only one underlying factor was found (Ahearne et al., 2005). Thus, a Cronbach alpha value of .88 was reported for the entire scale (Ahearne et al., 2005). Ahearne et al. (2005) reported their scale was comprised of ten items, with two of the four subscales fostering participation in decision-making and expressing confidence in high performance containing two items each (Ahearne et al., 2005). The remaining two subscales (enhancing the meaningfulness of work and providing autonomy for bureaucratic constraints) each contained three items. Although the literature is not conclusive concerning the minimum number of indicators for a factor, three indicators is generally accepted, particularly when used with small sample sizes (Kelloway, 2015).

In summary, acceptable content validity is evident for both Ahearne et al.'s (2005) and Hui's (1994) LEB instruments. Each makes clear linkages to Conger and Kanungo (1988) Process Model of Empowerment. The omission of a subscale and items

addressing goal accomplishment in Ahearne et al. (2005) instrument limits its use in nursing research, given the importance of goal attainment and outcome measurement in healthcare settings (Cummings et al., 2018). The acceptable content and construct validity of Hui's (1994) LEB instrument, together with consistent utilization in previous nursing studies, beginning with Laschinger et al., (1999) who first used this LEB scale, supported the suitability of this measure for nursing research studies. What is not clear is whether the shortened version of the scale maintains the structure of the original scale. Thus, to confirm the 16-item scale did indeed have five factors, the next step was to conduct a confirmatory factor analysis on the revised instrument.

Methods

This confirmatory factor analysis used data from the *Authentic Leadership for New Graduate Nurse Success* study by Laschinger et al. (2015). Random samples of 400 experienced Canadian nurses from Alberta, Ontario and Nova Scotia were asked to participate in the study. Eligibility criteria were: (i) registered nurses with three or more years of nursing practice; (ii) Alberta, Nova Scotia or Ontario hospital employees (currently full-time, part-time, or casual) involved in direct patient care; (iii) proficient in the English language. Exclusion criteria included nurses working in manager, educator and advanced practice roles, and those who were on leave from the workplace.

Data Collection Procedure

Following ethics approval, a letter of information, questionnaire, return envelope and coffee voucher were mailed to 1,200 participants. After four weeks, a follow-up survey package was mailed to participants who had not yet responded. A total of 478 completed questionnaires were returned (response rate of 39.8%), which exceeds the

minimum sample size of 200 for structural equation modelling as recommended by Kline (2016).

Instrument

Nurses' responses to items in Hui's (1994) adapted 16-item instrument were analyzed. Nurses were asked to rate their manager's leader empowering behaviours using a 7-point Likert scale ranging from 1 = "Strongly Disagree" to 7 = "Strongly Agree." Items comprise five subscales: enhancing the meaningfulness of work (four items), fostering participation in decision-making (three items), facilitating goal accomplishment (three items), expressing confidence in high performance (three items), and providing autonomy from bureaucratic constraints (three items). Items in the five subscales were averaged to obtain both subscales and a total LEB score.

Data Analysis

Descriptive statistics and Cronbach alpha reliability estimates were computed using the Statistical Software Package for Social Sciences (version 24, IBM 2015). First, the dataset was assessed for missing data; the volume of missing values was acceptable at < 5% (Kline, 2016). Item LEB7 had the highest number of missing values at 10, which equates to 2.09% of data missing for this item. A Little's Missing Completely at Random test was computed; the test was not significant (Chi-square = 600.75, p = .151) indicating that most missing values were missing completely at random. Missing data were assigned a code and in MPlus full information maximum likelihood estimation (FIML) deals with missing data by using complete and incomplete cases to estimate the values for SEM. As the reliability testing of the LEB subscales demonstrated acceptable internal consistency of subscales with Cronbach alpha values ranging from .87 to .96, confirmatory factor analyses were conducted using MPlus (version 7.2, Muthén & Muthén 1998-2015). A

one-factor solution was examined and compared to a five-factor model in terms of model fit using techniques described by Kelloway (2015).

Several goodness-of-fit indices for the confirmatory factor analyses were examined. A small non-significant chi-square test indicates a good fit with the data. However, as sample sizes increase the chi-square test is more likely to be significant. Given this limitation, researchers also consider other fit indices (Kelloway, 2015). Thus, the Comparative Fit index (CFI) and Tucker-Lewis index (TLI) (> .95), and the Standardized Root Mean Square Residual (SRMR) with values lower than .08 were used as standards to determine goodness-of-fit with the data (Kelloway, 2015). In addition, the Root Mean Square Error of Approximation (RMSEA) was reviewed for goodness of fit with the data. While Steiger (1990) indicated that RMSEA values less than .10 indicate a good fit to the data and values less than .05 indicate a very good fit, Hu and Bentler (1999) recommended values of .06 or less. 95% confidence intervals were also generated for the estimated RMSEA value, for use with the PCLOSE test of close fit (Kelloway, 2015). The PCLOSE test of the confidence intervals for the RMSEA result indicates whether or not the data differs significantly from the recommended .05 RMSEA value (very good fit to the data) as suggested by Steiger (1990).

Results

Participant Characteristics

Participant demographics are summarized in Table 3.3. The majority of participants were female (91.6%) with an average age of 45.6 years (*S.D.* = 11.1). Most participants were educated at either the college nursing diploma (41.3%) or BScN level (50.5%) and indicated their employment status was full time (54.9%). All participants reported residing in only one province (Alberta 31.8%, Ontario 33.5%, and Nova Scotia

34.7%). Medical surgical (42%) and critical care (29%) were the most commonly reported participants' current specialty domain of practice.

Table 3.3

Demographic Characteristics (*N* = 478)

		M	***SD***
Age		45.6	11.1
Number of Years	Experience as RN	20.3	11.8
	Current Organization	14.8	10.3
	Current Unit	9.8	8.3
		n	***%***
Gender	Female	438	91.6
	Male	40	8.4
Highest Degree Received	BScN	241	50.5
	MScN	39	8.2
	College Diploma	197	41.3
Employment Status	Full Time	259	54.9
	Part Time	170	36.0
	Casual	43	9.1
Unit Specialty	Medical-Surgical	200	42.0
	Critical Care	138	29.0
	Maternal-Child	62	13.0
	Community Health	45	9.5
	Mental Health	27	5.7
	Other	4	0.8
Province	Alberta	152	31.8
	Nova Scotia	166	34.7
	Ontario	160	33.5

Reliability

Cronbach's alpha reliabilities were calculated to examine the internal consistency of the LEB subscales. Values in this study ranged from .87 to .96, exceeding the minimum generally accepted value of .70 (Polit & Yang, 2016). This analysis supports

the internal consistency of the LEB subscales, and confirms the instrument represents the dimensions of LEB as intended by Hui (1994). Cronbach alpha values are presented in Table 3.4 with the mean and standard deviations of the subscales.

Table 3.4

LEB Subscale Mean, Standard Deviation and Cronbach Alpha Values

	M	*SD*	*Cronbach's alpha*
Meaningfulness of Work	4.33	1.60	.96
Participation in Decision-Making	3.99	1.71	.89
Confidence in High Performance	5.31	1.38	.91
Goal Accomplishment	4.37	1.59	.92
Autonomy from Bureaucratic Constraints	4.32	1.52	.87
Total Leader Empowering Behaviour	4.47	1.40	.97

Construct Validity

A one-factor model was compared to a five-factor model using confirmatory factor analysis techniques (Kelloway, 2015). The technique of comparing rival models was recommended by Kelloway (2015) as a way to determine that the proposed model provides a better fit to the data than other possible models. The maximum likelihood estimator in MPlus (version 7.2, Muthén & Muthén 1998-2015) was employed for both analyses. Item means, standard deviations, skewness, and kurtosis values are presented in Table 3.5. For the one-factor model, goodness of fit measures did not meet minimum requirements (Table 3.6), indicating a poor fit with the data (CFI = .80; TLI = .77; SRMR = .07; RMSEA .18 [.172, .188]). In addition, factor loadings for LEB9 and LEB15 were below .7 at .631 and .618 respectively.

Table 3.5

Means, Standard Deviations, Skewness, and Kurtosis Values for LEB Items

Item Number and Descriptor	*M*	*SD*	Skewness	Kurtosis
LEB1 Helps me understand the importance of my work	4.43	1.72	-0.40	-0.88
LEB2 Helps me understand how my work fits into "the bigger picture"	4.22	1.70	-0.28	-0.88
LEB3 Helps me understand how the objectives and goals of my nursing unit relate to that of the entire organization	4.28	1.67	-0.34	-0.83
LEB4 Helps me understand the purpose of my work	4.38	1.70	-0.29	-0.84
LEB5 Provides many opportunities for me to express my opinions	4.44	1.87	-0.39	-1.01
LEB6 Often consults me on work issues	3.97	1.92	-0.09	-1.23
LEB7 Makes many decisions with me	3.35	1.87	.182	-1.16
LEB8 Always shows confidence in my ability to do a good job	5.09	1.68	-0.88	-0.04
LEB9 Believes that I can handle demanding tasks	5.57	1.40	-1.24	1.31
LEB10 Believes in my ability to improve even when I make mistakes	5.26	1.42	-0.86	0.41
LEB11 Helps me overcome obstacles to my performance	4.49	1.66	-0.39	-0.63
LEB12 Helps me to identify what I need in order to achieve my performance goals	4.36	1.71	-0.29	-0.80
LEB13 Always makes sure that I have the resources needed for effective performance	4.24	1.77	-0.34	-0.88
LEB14 Makes it more efficient to do my job by keeping the rules and regulations simple	3.98	1.74	-0.16	-0.94
LEB15 Allows me to do my job my way	4.49	1.67	-0.48	-0.61
LEB16 Encourages me to make important decisions that are directly related to my job	4.50	1.71	-0.43	-0.71

Table 3.6

Fit Indices for the One-Factor and Five-Factor Models

Model	Chi-square (df)	RMSEA (Confidence Intervals)	CFI	TLI	SRMR
One-Factor	1,689.83 (104)	.18(.172,.188)	.80	.77	.07
Five-Factor	415.33 (94)	.09 (.077, .094)	.96	.95	.04

Conversely, for the five-factor model analysis the CFI, TLI, and SRMR goodness of fit measures indicated a good fit with the data with all factor loadings exceeding .7. While the RMSEA value was acceptable (<.10) at .09 (.077, .094) in accordance with Steiger's (1990) recommendations, the PCLOSE test of close fit indicated the estimated value was significantly different to the .05 threshold for a very good fit with the data (Steiger, 1990). Goodness-of fit indices for both models are presented in Table 3.6. Results indicate the five-factor model provided a superior fit with the data $\chi^2(94) = 415.33$, $p < .001$ when compared with the one-factor model. $\chi^2(104) = 1689.83$, $p < .001$. The chi-square difference was $\chi^2(10) = 1274.50$, $p < .001$. The superior results from the five-factor model confirm the fit of the subscales to the LEB dimensions identified by Hui (1994). Standardized parameter estimates for the five-factor model are presented in Table 3.7. All model parameters were significant ($p < .001$) and accounted for large amounts of item variance ($R^2 = .59$ to .89). Table 3.8 displays the correlations between factors.

Table 3.7

Standardized Parameter Estimates for the Five-Factor Model

Item Number and Descriptor	**Meaning-fulness of Work**	**Participation in Decision-Making**	**Confidence in High Performance**	**Goal Accom-plishment**	**Autonomy from Bureaucratic Constraints**	***R square***
LEB1 Helps me understand the importance of my work	.93					.86
LEB2 Helps me understand how my work fits into "the bigger picture"	.94					.89
LEB3 Helps me understand how the objectives and goals of my nursing unit relate to that of the entire organization	.90					.81
LEB4 Helps me understand the purpose of my work	.93					.86
LEB5 Provides many opportunities for me to express my opinions		.86				.74
LEB6 Often consults me on work issues		.86				.74
LEB7 Makes many decisions with me		.86				.74
LEB8 Always shows confidence in my ability to do a good job			.89			.79
LEB9 Believes that I can handle demanding tasks			.87			.76
LEB10 Believes in my ability to improve even when I make mistakes			.88			.77
LEB11 Helps me overcome obstacles to my performance				.91		.83
LEB12 Helps me to identify what I need in order to achieve my performance goals				.92		.84
LEB13 Always makes sure that I have the resources needed for effective performance				.84		.71
LEB14 Makes it more efficient to do my job by keeping the rules and regulations simple					.83	.70
LEB15 Allows me to do my job my way					.77	.59
LEB16 Encourages me to make important decisions that are directly related to my job					.89	.79

Note: All values are significant at the p<.001 level

Table 3.8

Factor Correlations

	1	2	3	4	5
1. Meaningfulness of Work	1.00				
2. Participation in Decision-Making	.81	1.00			
3. Confidence in High Performance	.67	.76	1.00		
4. Goal Accomplishment	.86	.88	.76	1.00	
5. Autonomy from Bureaucratic Constraints	.74	.87	.76	.85	1.00

Note. All values are significant at the $p < .001$ level.

Discussion

Hui's (1994) LEB tool is a suitable instrument for use in nursing studies when the measurement of nurse manager LEB is needed. Although the LEB instrument was developed for use in the field of business, it has been utilized successfully in four nursing research studies (Dahinten et al., 2014; Greco et al., 2006; Laschinger et al., 1999; Meyer-Bratt, et al., 2000). Acceptable content and face validity together with reliability and confirmatory factor analyses in this research indicate the 16-item (shortened) version of Hui's instrument can be consistently used to measure the five LEB domains as originally intended. The confirmatory factor analysis results in this research study yielded similar findings to Siu's (2015) unpublished dissertation study that included an examination of Hui's (1994) adapted 16-item LEB instrument ($\chi^2(96) = 255.08$, $p < .001$, SRMR = .04, CFI = .97, RMSEA = .072).

These findings make an important contribution to the nursing literature while offering notable benefits to the researcher; specifically, shorter scales reduce respondent burden, thereby positively impacting participant recruitment and retention and reducing

costs (Polit & Yang, 2016). We note reliability results for the subscales of .87 to .96 are higher in this analysis than those reported by previous nursing researchers who used the longer version of the instrument (Greco et al., 2006; Laschinger et al., 1999; Meyer-Bratt et al. 2000). Further, the Cronbach alpha value for the total scale was .97 in this research. This was surprising as longer scales are generally assumed to yield higher internal consistency than shorter scales (Polit & Yang, 2016). The increased reliability results may be explained by the minor changes to the wording of LEB items used in the *Authentic Leadership for New Graduate Nurse Success* study by Laschinger et al. (2015).

The LEB subscale means ranged from 3.99 (Participation in Decision-Making) to 5.31 (Confidence in High Performance), aligning with findings from Laschinger et al. (1999) and Greco et al. (2006) research studies. It is encouraging to see nurses in the current study scored their managers' LEB at a high level for expressing confidence in their performance; yet these nurses also indicated they have moderate opportunities to be engaged in decision-making. The items contributing to the LEB participation in decision-making subscale mean value of 3.99 (SD = 1.71) included: provides many opportunities for me to express my opinion (M = 4.44, SD = 1.87); often consults me on work issues (M = 3.97, SD = 1.92); and makes many decisions with me (M = 3.55, SD = 1.87). These results suggest participants perceive they can voice their support, ideas, or concerns in the workplace; but feel disconnected from their nurse manager with regards to decision-making. The latter may be explained by the nature of nursing work and the reality that decisions about patient care are routinely made at all times of the day and night without the involvement of the nurse manager. Alternatively, participants may not have felt included in decisions about unit changes and workflows. Future researchers may

wish to reword this item to incorporate the types of decisions that are made with the nurse manager.

The impact of nurse involvement in decision-making has been explored in the literature. Findings from the Magnet hospital studies linked healthy work environments, where nurses are empowered to achieve goals and be involved in participatory decision-making, to higher nurse attraction rates and retention rates (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). Thus, nurse managers should promote opportunities for nurses to be involved in decision-making about unit processes and allocation of resources as a strategy to stabilize the nursing workforce. Staff meetings and huddles provide forums to engage nurses to discuss ideas and provide feedback (Dahinten et al., 2016)

As expected, loading estimates were high for all items onto their specific factors, thus confirming the five-factor structure proposed by Hui (1994). The lowest loading estimate (.77) was for LEB15 "Allows me to do my job my way," which loaded onto the Providing Autonomy from Bureaucratic Constraints factor. The R^2 (square of the loading) value of .59 reflects the amount of variance in the model explained by item LEB15 and was also the lowest value. Scholars and researchers discuss the importance of promoting employee autonomy and independent decision-making (Amundsen & Martinsen, 2014); while nurses at the point of care must comply with professional regulations, legislation, organizational policies and work in hierarchical environments (Manojlovich, 2007). Arguably, point of care nurses may feel they have limited opportunities to practise nursing in "my own way" due to these constraints, which may explain why this parameter estimate and R^2 value were lower than the remaining values. Dahinten et al. (2016) stresses the importance of managers assisting nurses to identify the areas where they do have autonomy and the opportunity to make a difference.

The selection of a LEB instrument for a research study is an important decision (Polit & Beck, 2012). Following this review of two LEB instruments and the literature at large, there is a need to organize and categorize the leader empowering behaviour literature. This may include two broad categories such as management practices and psychological empowerment as suggested by Cheong et al. (2019). This first step may assist with building consensus regarding which LEB behaviour should be included in each LEB subscale. A logical next step is the categorization of existing measures or development of instruments that reflect the identified LEB within each LEB subscale. Finally, scholars have argued that LEB may occur at multiple levels (Cheong et al., 2019). To illustrate, it is conceivable that nurses feel empowered at one level (e.g. organization level), and not at another level (e.g. individual or team level). Of eight LEB instruments cited by Cheong et al. (2019), five were intended for individual measurement, compared with only one for use at the team level, and two that could be used at the individual or team levels. Thus, additional instruments are needed to measure differences at multiple levels, which may further enhance our understanding of empowerment (Friend & Sieloff, 2018).

Implications for Nursing

This psychometric analysis supported the suitability of Hui's 16-item LEB instrument for use in nursing research studies. The instrument consistently measures what it was intended to measure and reflects leader behaviour experienced by nurses in patient care settings. Past Magnet hospital research studies (Aiken et al., 2002; Aiken et al., 2011), subsequent studies by Laschinger and colleagues (Laschinger & Fida, 2015; Laschinger, Wong & Grau, 2013), and Cummings et al.'s (2018) systematic review, point to the relationships between healthy work environments, nurse retention, job satisfaction,

and productivity. Supportive leader behaviour is a critical component in enhancing such environments (Cummings et al., 2018). LEB provide a concrete framework for nurse managers to operationalize such support.

Utilization of this measure in quantitative research studies may assist researchers in demonstrating the important role leaders play in enhancing healthy work environments, as well as nurse and unit outcomes. In turn, research findings may inform decisions at the system and organizational levels concerning investments in nurse manager education and selection processes (Laschinger et al., 2013; MacPhee et al., 2014). Annual manager performance reviews provide another way to reinforce key leader behaviours on an ongoing and regular basis.

Limitations and Recommendations

We acknowledge the limitations of this analysis using data from nurses employed in only hospital settings in three Canadian provinces. Further testing in the remaining Canadian provinces, internationally and other healthcare settings, such as long-term care, public health, and the community is recommended. Conceivably, this instrument could be tested with other healthcare populations in the hospital setting such as occupational therapists, physiotherapists and pharmacists. The proportion of male participants was very low; thus, further exploration is warranted to determine whether gender influences nurses' experience of their leader's empowering behaviour. Cheong et al. (2019) notes the importance of examining the influence of gender for both participants and leaders.

This analysis reinforced the use of Hui's (1994) LEB instrument at the individual level of analysis. Additional research is warranted to measure LEB at different levels of analysis. For example, nurses' experience of LEB at the individual, team and organizational levels may highlight interaction (moderator) effects; thereby increasing

our understanding of empowerment, as well as identifying strategies to promote healthy work environments. Studies to examine relationships between LEB, span of control, nurse and patient outcomes in hospital, long-term care, and community settings are warranted to determine how increasing the nurse manager's span of control impacts nurses' LEB. Interventional studies may also be considered. Dahinten et al. (2014) tested the effects of a leadership development program on staff nurse perceptions of organizational support and organizational commitment. These researchers reported that both dependent variables were enhanced by structural empowerment and LEB (Dahinten et al., 2014). Similarly, nurse outcomes such as work engagement and job turnover intentions may be measured prior to and following the implementation of a LEB nurse manager education program.

Finally, longitudinal research that examines nurse and manager characteristics (e.g. length of relationships between nurse and manager, number of years of nurse and manager experience in their roles as a nurse and working in a given setting) may illuminate changes over time and identify specific populations of nurses who would benefit most from empowering leader behaviour.

Conclusion

Confirmatory factor analysis and reliability testing supports Hui's 16-item LEB as a valid and reliable instrument that is suitable for use in nursing research studies. The shortened scale presents benefits to researchers who are interested in reducing respondent burden, increasing participant recruitment and retention, and containing costs.

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CHAPTER IV: THE IMPACT OF LEADER EMPOWERING BEHAVIOUR ON EXPERIENCED NURSES' SELF-EFFICACY, INTERPROFESSIONAL COLLABORATION, NURSE AND PATIENT OUTCOMES

Background and Significance

Especially during healthcare transformation and system reform, nursing leadership matters. Nurse leaders are optimally placed to support and assist staff to navigate organizational and system changes. They play a pivotal role in influencing unit, program and organizational outcomes (Cummings et al., 2018). In recent years, economic constraints have driven healthcare changes. Movement of resources from hospitals to the community has resulted in decreased numbers of hospital beds and reduced lengths of stay (Aiken et al. 2014; Simpson, Dearmon, & Graves, 2017). Simultaneously, healthcare demands have increased due to increasing complexity of care needs and an aging population, amidst skill mix changes and the introduction of regulated and unregulated providers (Canadian Nurses' Association, 2015; Prince et al., 2015). These healthcare system changes require the knowledge and expertise of the RN to lead interprofessional teams and coordinate care delivery in the hospital setting (Erickson, Jones, & Ditomassi, 2013). Experienced nurses are a particularly valuable resource as they are frequently called on to act as mentors and facilitate younger nurses' transition into hospital nursing practice (Canadian Institute for Health Information, 2017). It is therefore imperative to identify what conditions support experienced RNs in this important role.

The impact of leadership styles on nursing outcomes has been examined in the literature (Gormley, 2011; Raup, 2008). In a recent systematic review, Cummings et al. (2018) appraised leadership styles and their impact on the nursing workforce and work environments. These researchers reported that relational leadership styles such as

transformational and authentic leadership styles, which focus on people rather than tasks, were associated with higher levels of job satisfaction, organizational commitment, teamwork and empowerment. Leadership practices and behaviour such as participative decision-making, supervisor support, praise and recognition have also been linked to positive employee outcomes, including staff nurse intention to stay and job satisfaction (Cowden & Cummings, 2012). While the impact of relational leadership styles on nurse and patient outcomes has been studied extensively, the mechanisms as to how leader behaviour impact outcomes are not well understood (Cummings et al. 2018). Leader Empowering Behaviour (LEB) described by Conger and Kanungo (1988) and Hui (1994) provides a framework to understand how relational leadership motivates employees through five leader behaviours that strengthen employee self-efficacy. The purpose of this study was to test a model that examined the motivational effects of LEB on experienced staff nurse self-efficacy in the workplace, and in turn its mediated effects on interprofessional collaboration, nurse-assessed adverse patient outcomes and intention to remain in their current positions.

Literature Review and Conceptual Framework

This section provides an integrative review of the literature. First, an overview of empowerment is provided. This is followed by Bandura's (1977) Self-Efficacy theory which serves as the foundation for Conger and Kanungo's (1988) *Process Model of Empowerment* and Hui's (1994) work to define and operationalize LEB. A discussion of the key constructs in this research and their observed relationships is provided; specifically, interprofessional collaboration, nurse-assessed adverse patient outcomes, and turnover intention.

The conceptual framework for this study is rooted in Conger and Kanungo's (1988) *Process Model of Empowerment.* Conger and Kanungo claimed that self-efficacy plays an important role in motivating and empowering employees. Thus, Bandura's (1977) self-efficacy theory formed the foundation of Congo and Kanungo's model (Figure 4.1). Conger and Kanungo claimed managerial strategies or techniques strengthen the individual's self-efficacy and increase employee power, which in turns improves outcomes (Ahearne, Mathieu, & Rapp, 2005; Amundsen & Martinsen, 2014b; Cheong, Spain, Yammarino, & Yun, 2016; Cheong, Yammarino, Dionne, Spain, & Tsai, 2019; Kim & Beehr, 2017). Amundsen and Martinsen (2014a) reinforced the idea that empowering leadership is necessary in work environments where there is a transfer of additional power from leaders to knowledge workers. This applies in the current healthcare environment, where staff nurses with high autonomy are required to make decisions about care delivery 24 hours a day, seven days a week in response to patients' changing conditions (Amundsen & Martinsen, 2014b). Nurses must also be involved in decisions about their work environment (Manojlovich, 2007). Evidence points to improved nursing and patient outcomes, such as increased job satisfaction, decreased burnout and depersonalization, as well as decreased patient mortality and morbidity when nurses are involved in participatory decision-making (Aiken, Clarke & Sloane, 2000; Kretzchmer et al., 2017).

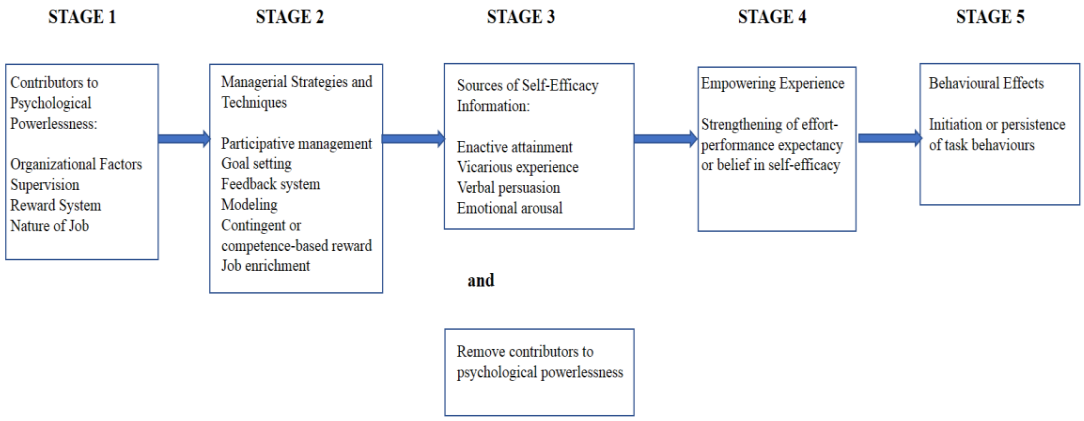

Figure 4.1. Conger and Kanungo (1988) Process Model of Empowerment

Integral to the empowerment process, Conger and Kanungo (1988) claimed that employees must experience an increase in self-efficacy. The manager plays a key role in providing information to employees via Bandura's (1977, 1997) four informational sources: *performance accomplishments or mastery*, v*icarious experience*, v*erbal persuasion*, and *emotional arousal* or *physiological and affective states.* In this research, nurse leaders are optimally placed at the unit level to employ Bandura's (1977) informational sources to enhance staff nurse self-efficacy in the workplace. When nurse leaders provide opportunities for staff to express their opinions (vicarious experience), show confidence in their ability to do a good job and encourage them to make important decisions that are directly related to their jobs (verbal persuasion), and influence the level of arousal that nurses are experiencing (emotional arousal or physiological and affective states), these behaviours increase staff nurses' self-efficacy concerning their effectiveness in their work environments. The net result is the sharing of power, which in turn positively influences nurse and patient outcomes (Manojlovich, 2005).

Building on Conger and Kanungo's (1988) work, Hui (1994) identified five types of Leader Empowering Behaviour (LEB). The first LEB, *enhancing the meaningfulness of work* refers to leader behaviour that promotes purpose and meaning to followers' work. Employees identify themselves as important members of the organization; they are motivated to perform their tasks and understand the importance of their contributions to, and of their roles in the organization. The second LEB *Fostering participation in decision-making* focuses on the leader soliciting inputs from followers in problem situations and encouraging active involvement in decision-making processes. Creating opportunities for followers to express their job-related opinions and make decisions together enhances employee self-efficacy and empowerment (Hui).

The third LEB *Expressing confidence in high performance* focuses on leader behaviour that cultivates the confidence of, as well as showing confidence in, the follower's ability to perform at a high level. This includes recognizing follower accomplishments and conveying to followers that they can fulfill the leader's expectations. The fourth LEB *facilitating goal accomplishment* is aimed at enhancing follower skills and providing resources necessary for effective performance and goal attainment. This includes training for deficiencies, providing necessary resources, and removing obstacles to performance. The fifth and final LEB is named *providing autonomy from bureaucratic constraints.* Here, leader behaviour focuses on minimizing administrative details and rule mindedness so that followers can initiate task behaviours and perform their jobs with effectiveness and efficiency. This includes simplifying organizational rules and procedures, reducing command levels, and encouraging followers to find ways to achieve their performance goals (Hui, 1994).

Nursing Research Assessing Leader Empowering Behaviour

A few studies have examined the impact of LEB on nursing outcomes. In a large cross-sectional US and Canadian study of 1,973 pediatric intensive care nurses in 65 institutions, Meyer Bratt, Broome, Kelber, and Lostocco (2000) demonstrated the positive impact of nursing leadership on staff nurse job satisfaction. Other studies have reported links between LEB and nurse outcomes. Laschinger, Wong, McMahon, & Kaufmann (1999) found that LEB influenced perceptions of empowerment structures (resources, opportunity, support and information) in organizations, which in turn increased work effectiveness and reduced job tension. In a cross-sectional study of 191 full time staff nurses in three Ontario acute care teaching hospitals, Peachy (2002), in an unpublished dissertation, demonstrated that LEB was significantly related to workplace empowerment, psychological empowerment, and organizational commitment. Greco et al. (2006), in their cross-sectional study of 500 staff nurses in Ontario acute care hospitals, determined that LEB can enhance person-job fit and increase work engagement. Dahinten Lee, and MacPhee (2016) described positive relationships between structural empowerment, psychological empowerment, and LEB. Finally, Cziraki and Laschinger (2014), in an analysis of data from 322 Ontario staff nurses reported the mediation effect of structural empowerment in the relationship between LEB and work engagement.

In light of these findings, it was predicted that when leaders provide purpose and meaning to staff nurses' work, create opportunities for staff nurses to be involved with decision-making, support staff nurse performance through the provision of resources, acknowledge high performance, and create environments that optimize effectiveness and

efficiency, that staff nurse self-efficacy in the workplace is increased. In this study, LEB was proposed to have a positive association with experienced staff nurse self-efficacy:

$H^{1:}$ LEB is positively related to staff nurse self-efficacy.

Self-Efficacy

At the unit level, registered nurses work collaboratively with patients, families and interprofessional team members every day to achieve positive outcomes (Connolly, Jacobs, & Scott, 2018; Pate, 2013). In this research, the focus was on the relationship between empowering leader behaviour and nurses' self-efficacy to perform their work as interprofessional team members by enhancing their capabilities to organize and execute the courses of action to deliver results (Bandura, 1997, Manojlovich, 2005). More specifically, nurses with heightened self-efficacy experience confidence in analyzing long-term problems to find solutions, identifying goals and targets, and presenting information to a group of colleagues.

In the absence of nursing research examining the relationship between SE and interprofessional collaboration in direct practice, the nursing education literature was reviewed to shed light on this relationship. Norgaard et al., (2013) uncovered an association between interprofessional training and increased self-efficacy of nursing and interprofessional team students. The organizational research literature was also reviewed. In recent years, scholars have explored how empowering leadership styles directly and indirectly impact outcomes through self-efficacy (SE). In a study of 231 salespeople, Ahearne et al., (2005) examined the indirect association of LEB on customer satisfaction and sales performance via self-efficacy. These researchers reported that employees with lower levels of industry knowledge benefited most from LEB (Ahearne et al., 2005). In their recommendations for future research, Ahearne et al., (2005) acknowledged concerns

about the self-efficacy measure they developed for this study, underscoring the need for further scale development. Kim and Beehr (2017) reported the direct association of SE with in-role performance as well as the mediating role of self-efficacy on the LEB and in-role performance relationship.

Recently, Cheong et al., (2016) reported findings from their Korean study of predominantly male leader-employee dyads. In their study, employee self-efficacy was directly related to work role performance and mediated the relationship between empowering leadership and work role performance. While the study supported the notion that LEB is a leadership style that enables employees to improve outcomes, Cheong et al., (2016) cautioned that LEB may have a darker side or burdening effect. Specifically, these researchers tested the indirect effect of LEB on work role performance through job induced tension. They identified that when LEB is used inappropriately, job tension or feelings of nervousness at work can increase, possibly due to employee perceptions that their leader has relinquished their role and responsibilities. Thus, Cheong et al. (2016) recommended that leaders continuously monitor and adjust their style to meet employee needs. Cheong et al.'s (2019) review of the empowering leadership literature pointed to the multi-faceted nature of empowering leadership and the need for additional research to enhance our understanding of LEB. This includes examining reverse causation (impact of employee behaviour on leadership style) and identifying the antecedents of LEB.

These studies confirm the direct effects of SE on employee outcomes, as well as the indirect effects of LEB on outcomes through SE. Thus, staff nurse SE was hypothesized to be positively associated with interprofessional collaboration.

$H^{2:}$ SE is positively related to staff nurse interprofessional collaboration

Interprofessional Collaboration

Interprofessional collaboration (IPC) has been cited as an effective strategy to improve patient, provider, organizational and system outcomes, and address health workforce shortages (Regan et al. 2015; World Health Organization, 2010). Defined as "a partnership between a team of health professionals and a client in a participatory, collaborative, and coordinated approach to shared decision-making around health and social issues" (Orchard et al., 2005), IPC has positive benefits such as improved patient outcomes, healthcare professional retention and job satisfaction (Barrett et al. 2007; Suter, et al. 2012). In a cross-sectional study of new graduate nurses, relational leadership practices and structural empowerment were identified as important positive predictors in promoting IPC (Laschinger & Smith, 2013). Building on this evidence, Regan, Laschinger, and Wong. (2016) analyzed data from a cross-sectional study of experienced staff nurses in Ontario and concluded that authentic leadership, structural empowerment, and a professional practice milieu promote IPC.

The previous studies point to the positive effects of collaborative and supportive management practices; however, there is a gap in the literature concerning the effect of LEB on IPC. It is reasonable to expect that leaders who demonstrate LEB will create the conditions for IPC. Greater understanding and valuing of other professionals' roles will enhance staff nurses' perceptions concerning collaboration in the provision of patient care. Visible, accessible managers who model IPC have been linked to increased IPC in new graduate nurse populations (Anderson, Linden, Allen, & Gibbs, 2009; Pfaff, Baxter, Ploeg, & Jack, 2014). Further, interprofessional training has been linked to an increased sense of self-efficacy among students from nursing, medicine, physiotherapy, occupational therapy, laboratory technology and radiology (Norgaard et al., 2013). It is therefore conceivable that LEB positively impacts IPC through self-efficacy. Given the

numerous benefits of IPC to patient care and safety, and its positive impact on healthcare professional retention, examining the relationship between LEB and IPC, directly and indirectly through self-efficacy will shed important light on how leaders can influence IPC in their work environments. When leaders demonstrate LEB, their positive behaviours influence and reinforce the value and contributions of each profession and show how each team member contributes to improved patient, unit and organizational outcomes. Thus, it is proposed LEB enhances experienced staff nurses' IPC directly, and indirectly through self-efficacy:

H^3: LEB is positively related to IPC.

Nurse-Assessed Adverse Patient Outcomes

Adverse patient outcomes are defined as unintended injuries or complications that occur due to healthcare and not the patient's healthcare condition, and can result in death, disability or an increased length of hospital stay (Baker et al., 2004). Recently, the financial impact of adverse events has been estimated to be greater than 15% of hospital expenditures; with additional losses to patient and carer productivity accounting for trillions of dollars annually in the United States, Canada and 18 European countries (Slawomirski, Auraaen, & Kalzinga, 2017). As a result, researchers have been interested in examining the relationship between patient outcomes and nursing practice environments.

The relationship between nursing leadership and patient outcomes is a relatively understudied topic. Wong, Cummings, and Ducharme's (2013) systematic review of the literature identified 20 studies that examined the impact of nursing leadership on adverse patient events. These researchers concluded that positive relational leadership behaviour is negatively associated with some categories of adverse patient events and

complications, including lower mortality rates, medication errors, restraint use and nosocomial infections (Wong et al., 2013). While this systematic review highlighted the positive impact of relational leadership styles, Wong et al., (2013) called for research to examine the direct and indirect mechanisms of leadership influence on patient outcomes. In terms of specific leadership styles and patient outcomes, Cummings et al. (2010) reported that the high-resonant relational style of leadership that features emotional intelligence (Goleman, 2002) was linked to reduced mortality rates. This was followed by an examination of the impact of authentic leadership on nurse-assessed frequency of adverse patient outcomes by Wong and Giallonardo (2013), where increased authentic leadership was related to lower rates of nurse-assessed adverse patient outcomes.

Staff nurses who work in an environment that promotes collaborative care delivery and problem solving with other healthcare professionals perceive the benefits of IPC to include improved patient, provider, organization and system outcomes (Regan et al., 2015). As a result, staff nurses who work in such environments are more likely to report higher IPC and reduced nurse-assessed adverse patient outcomes. It can be argued that staff nurses who perceive that their leader is accessible, conveys the importance of their work and that of other professionals, and promotes collaborative and participative decision-making among all team members are also more likely to perceive higher levels of IPC (Anderson, Linden, Allen & Gibbs, 2009; Pfaff, Baxter, Ploeg & Jack, 2014). Such conditions promote collaborative patient care and problem solving, resulting in lower ratings of nurse-assessed adverse patient outcomes.

H^4: IPC is negatively related to nurse-assessed adverse patient outcomes.

Job Turnover Intentions

Recent projections have indicated that the nursing profession must grow to meet the needs of an aging population and complexity of care needs (Nei et al. 2015). A study of nine American regions revealed uneven projections across the country with a 40% expected growth of registered nurses from 2015 to 2030 in the East South-Central and West South-Central regions (Auerbach, Buerhaus, &Staiger, 2017). In Canada, an analysis conducted by Ariste, Bejaoui & Dauphin (2019) indicated a cross-Canada shortage of 50,000 to 60,000 nursing professionals by 2022. Stabilizing the nursing workforce by reducing turnover is a key enabler to addressing both current and future demands (Hayes et al. 2006). Although definitions for turnover vary, in this study turnover is understood as any job move, exiting the organization or leaving the nursing profession itself (Hayes et al., 2006) and measured by turnover intention or the desire to leave a position in the next year (Kelloway, Gottlieb, & Barham, 1999). Given measurement challenges with organization record keeping, turnover intention is the preferred predictor of actual turnover (Griffeth et al., 2000; Laschinger et al., 2012). Nei, Anderson Snyder & Litwiller (2015) reported turnover cognition/intentions were positively related to voluntary turnover (p = .29).

Supportive communicative leadership was determined to positively impact voluntary nurse turnover in a meta-analysis conducted by Nei et al. (2015). Superior working conditions and organizational characteristics, such as group cohesion and LEB have also been found to decrease turnover intention (Beecroft, Dorey & Wenten, 2008). Higher levels of authentic leadership have been linked to healthy workplace conditions that promote new graduate nurse retention (Laschinger et al, 2012). According to Avolio et al. (2009), authentic leaders encourage openness, sharing of information, and welcome

employee input during decision-making processes. Given the similarity of this aspect of authentic leadership to the *fostering participation in decision-making* LEB it is reasonable to expect that the LEB style also positively impacts staff nurse job turnover intentions. Staff nurses who work in environments that foster IPC recognize the positive impact of their collaborative work with other healthcare professionals, resulting in a more satisfying work experience and the desire to remain in their positions. Higher levels of staff nurse IPC will result in a lower level of staff nurse turnover intentions:

H^5: IPC is negatively related to job turnover intentions.

Hypothesized Model

Based on empirical research, we hypothesized that nurses who report higher LEB by their managers will report greater self-efficacy (H1) and interprofessional collaboration (H3), which in turn results in lower nurse-assessed adverse patient outcomes (H4) and a reduced intention to leave their positions (H5). (Figure 4.2). In addition, nurses who report higher self-efficacy report greater interprofessional collaboration (H2).

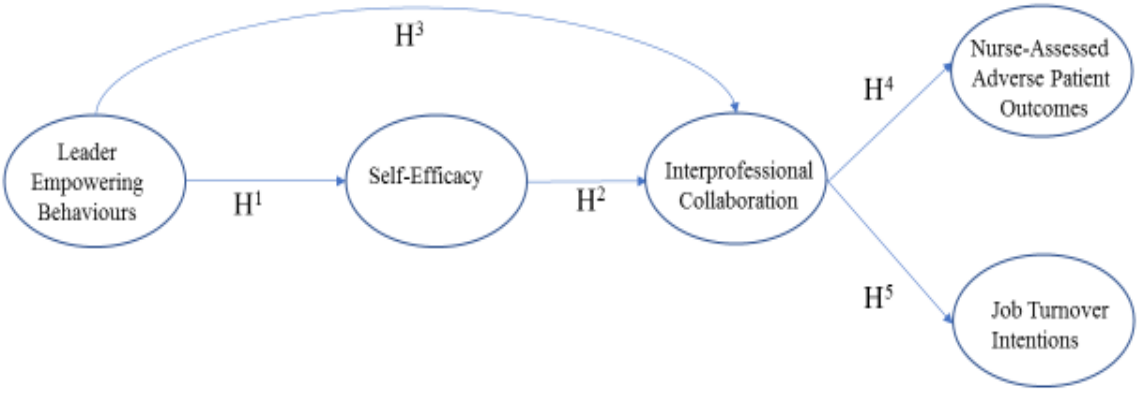

Figure 4.2. Hypothesized Model

Methods

Design and Sample

This study was a secondary analysis of baseline data of experienced nurses from the *Authentic Leadership for New Graduate Nurse Success* study authored by Laschinger, Wong, Finegan, and Fida (2015) and used a non-experimental predictive design to test the hypothesized model. Random samples of 400 nurses with greater than three years of nursing practice experience from each of three Canadian provinces (Alberta, Ontario and Nova Scotia) were invited to participate. The inclusion criteria were: (i) registered nurses with three or more years of service (to be considered experienced); (ii) current full-time, part-time, or casual employment in direct patient care at a hospital in Alberta, Nova Scotia, or Ontario, and (iii) proficiency in the English language. Nurses in manager, educator, coordinator, and advanced practice roles as well as those on leave from work were excluded.

Following ethics approval, 1,200 survey packages containing a letter of information, questionnaire, return envelope and coffee voucher were mailed out. A follow-up survey package was sent to participants who had not responded after four weeks, with a total of 478 completed questionnaires returned (response rate of 39.8%) exceeding the recommended sample size of 200 to conduct structural equation modelling analyses (Kline, 2016).

Instruments

The instruments used in this research study are valid standardized questionnaires that have been used in previous nursing research studies. Table 4.1 displays the psychometric properties for the instruments which are described below.

Leader empowering behaviour. Hui's (1994) LEB definitions and items align with the purpose of this study and can be linked back to the theoretical roots of self-efficacy and the *Process Model of Empowerment* described by Bandura (1977) and Conger and Kanungo (1988), respectively. To address content validity, items were generated based on Hui's construct definitions and sorted using a Q-Sort method into five LEBs by ten faculty members and senior PhD students (Hui). Exploratory and confirmatory factor analyses, using data from a business population, yielded a five-factor model with a reduction of items from 27 to 16 items (Hui). Hui's 16-item scale preserved the five categories of LEB with three items in each category, except for Enhancing the meaningfulness of work subscale, which contains four items. Cronbach alpha testing demonstrated internal consistency of subscales in Hui's (1994) study, with acceptable values ranging from .71 to .90 (Hui). Several nursing researchers have used Hui's 27-item LEB scale with consistent reliability; specifically, Laschinger et al. (1999) reported acceptable Cronbach alpha values of .77 to .95, with the exception of the Providing Autonomy from Bureaucratic Constraints subscale which yielded a value of .63; Greco et al. (2006) reported similar findings with values ranging from .64 for Providing Autonomy from Bureaucratic constraints, to .87 to .97 for the remaining four subscales; and Meyer-Bratt et al. (2000) reported Cronbach alpha values of .67 to .95 for all subscales.

Leader empowering behaviour was measured in the current study using a revised version of Hui's (1994) 16-item LEB scale with a Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Minor revisions simplified and clarified five items of the 16-item LEB instrument for use in the *Authentic Leadership for New Graduate Nurse Success* study by Laschinger, Wong Finegan and Fida (2015). For example, in the enhancing the meaningfulness of work subscale, "Helps me understand the importance of what I do at work" was reworded to "Helps me understand the importance of my work."

Table 4.1

Study Instruments: Variable Names, Authors, Scale Range, Number of Items and Cronbach Alphas

Variables and Subscales (Number of Items)	Instrument (Author)	Scale and Subscale Ranges	Cronbach's alpha
Leader Empowering Behaviour Scale (16 Items)	Leader Empowering Behaviour (Hui, 1994)	7-point scale from 1 (strongly disagree) to 7 (strongly agree)	.97
Meaningfulness of Work Subscale (4)			.96
Participation in Decision-Making Subscale (3)			.89
Confidence in High Performance Subscale (3)			.91
Facilitating Goal Accomplishment Subscale (3)			.92
Providing Autonomy from Constraints Subscale (3)			.87
Self-Efficacy (3)	Psychological Capital Questionnaire (Luthans et al., 2007) self efficacy subscale	6-point scale from 1 (strongly disagree) to 6 (strongly agree)	.81
Interprofessional Collaboration (5)	Interprofessional Collaboration Scale (Laschinger & Smith, 2013)	5-point scale from 1 (strongly disagree) to 5 (strongly agree)	.87
Nurse-Assessed Adverse Patient Events (4)	Adverse Events Instrument (Sochalski, 2001)	4-point scale from 1 (never) to 4 (frequently)	.74
Job Turnover Intentions (3)	Job Turnover Intentions (Kelloway et al., 1999)	5-point scale from 1 (strongly disagree) to 5 (strongly agree)	.81

As previously mentioned, all subscales contained three items, except for meaningful work which contained four items. Items in subscales and the total LEB scale were averaged. Sample items from each subscale included “Helps me understand how my work fits into the bigger picture” (Enhancing the meaningfulness of work), “Provides many opportunities for me to express my opinions” (Fostering participation in decision making), “Always shows confidence in my ability to do a good job” (Expressing confidence in high performance), “Always makes sure that I have the resources needed for effective performance” (Facilitating goal accomplishment), and “Makes it more efficient to do my job by keeping the rules and regulations simple” (Providing autonomy from bureaucratic constraints). All Cronbach alpha values for the subscales ranged from .87 to .96 (Table 4.1) exceeding the minimum generally accepted value of .70 (Polit & Yang, 2016). Cronbach alpha for the entire LEB scale in this research was .97.

Self-efficacy. Self-efficacy was measured using the self-efficacy subscale of the Psychological Capital instrument developed by Luthans, Avolio, Avey, and Norman (2007) which includes the four domains of self-efficacy, hope, optimism and resilience. Members of Luthan’s research team, with the assistance of other researchers, selected four scales to create the PsyCap scale, including Parker’s (1998) scale which measures self-efficacy in the workplace. Parker’s scale was developed based on qualitative interviews with a cross-section of staff from five occupational groups in a glass manufacturing company, including supervisors and managers, sales and marketing, clerical and administration, and sales assistants. Parker reduced a list of approximately 20 work tasks to ten that were deemed to be most generalizable to other organizations. Cronbach alpha testing for Parker’s instrument was reported as .96. Self-efficacy questions in Parker’s self-efficacy instrument are specific to the work domain, aligning

well with the theoretical underpinnings of this study. Questions focus on the important role that staff nurses play in coordinating collaborative patient care, including: "*I feel confident helping to set targets/goals in my work area"* and "*I feel confident presenting information to a group of colleagues*," (Luthans et al.).

While Parker's scale deviated from the task magnitude and strength measurements originally described by Bandura (1997), self-efficacy scales using Likert scales have undergone reliability testing and confirmatory factor analyses with results indicating that Likert scales are an acceptable method for measuring self-efficacy (Maurer & Pierce, 1998). Internal consistency of the self-efficacy subscale was acceptable in four samples ranging from .75 to .85 (Luthans et al., 2007). The Psychological Capital scale underwent confirmatory factor analyses with two populations. Both studies yielded a four-factor model with acceptable model fit and high reliability for the self-efficacy subscale at .89 (Luthans et al.). Participants in the current study responded to three items using a 6-point Likert scale ranging from *Strongly Disagree* = 1 to *Strongly Agree* = 6. Items were averaged to provide a total score. In the current study, acceptable reliability of this measure was demonstrated (Cronbach alpha = .81).

Interprofessional collaboration. Laschinger and Smith (2013) constructed the *Interprofessional Collaboration Scale* (IPC) based on previous research that identified the characteristics of IPC in healthcare environments (Kenaszchuk, Reeves, Nicholas, & Zwarenstein, (2010); Orchard, Curran, & Kabene, 2005). In total, five items address health professional collaboration, understanding of other professionals' roles in the workplace and interdependency (D'Amour, Ferrada-Videla, San Martin Rodrigues, & Beaulieu, 2005; Orchard et al., 2005). Findings of studies by Laschinger and Smith (2013) as well as Regan, Laschinger, and Wong (2016) have shown convergent validity

of the IPC scale by positive associations with authentic leadership, structural empowerment and professional practice environments, providing additional support for the use of this measure in the current research. Examples of items in the IPC scale include: "*On my unit all health professionals collaborate effectively to provide patient care,"* and *"Health care professionals on my unit understand each other's role in providing holistic patient care."* Results of an exploratory factor analysis suggested a one-factor model that explained 53.4% of the total variance in the model (Laschinger & Smith). Regan, Laschinger, and Wong (2016) reported a Cronbach's alpha of .90, demonstrating internal consistency of the scale. In this study, participants rated five items on a 5-point Likert scale ranging from *Strongly Disagree* = 1 to *Strongly Agree* = 5. Items were averaged to provide a total score. Reliability testing indicated acceptable internal consistency (Cronbach alpha = .87).

Nurse-assessed frequency of adverse patient events. Derived from the American Nurse Association (ANA) Nursing Quality Indicators (ANA, 2000) database, Sochalski (2001) designed an instrument to measure nurses' perceptions of the frequency of adverse patient outcomes, specifically, medication errors, nosocomial infections and patient falls with injuries. Indicators for the ANA Nursing Quality Indicators database were created based on scientific literature, researcher consultation concerning reliability and validity threats, and review of draft indicator definitions by experts (Montalvo, 2007). Using a 4-point scale, where *Never* = 1 and *Frequently* = 4, participants in the primary study were asked about adverse patient events including medication errors, nosocomial infections, complaints and falls, prefixed by the stem "*Over the past year, how often would you say each of the following incidents has occurred involving you or your patients?"* Item responses were averaged to give a total score. Cronbach alpha for

this instrument was not reported by Sochalski; however, Laschinger and Leiter (2006) reported a Cronbach alpha value of .75. In this study, Cronbach's alpha for this measure was acceptable at .74.

Job turnover intentions. Job turnover intentions was incorporated in an instrument developed by Kelloway, Gottlieb, and Barham (1999) based on a review of previous literature examining work and family conflict, and withdrawal from the workplace. The construct validity of this scale is supported by previous research which provided evidence of relationships between turnover intentions and structural empowerment (Laschinger, Leiter, Day, & Gilin (2009), and turnover intentions, authentic leadership and organizational identification (Fallatah, Laschinger, & Read, 2017). Three items from the original four-item scale have been used by Laschinger and colleagues in previous nursing research studies to explore nurses' intentions to leave or remain in their jobs (Fallatah, Laschinger, & Read 2017; Laschinger, 2012; Laschinger, Zhu, & Read, 2016). Cronbach alpha values were originally reported as .92 and .93 by Kelloway, Gottlieb, and Barham. Laschinger et al., (2009) also reported a high Cronbach alpha value of .82 for this scale, and item total correlations ranging from .57 to .63. In this study, participants' intentions to leave their job were rated using a 5-point Likert Scale (*Strongly Disagree* = 1; *Strongly Agree* = 5). Consistent with previous nursing research, three of the four items were used in the current study. Cronbach's alpha testing indicated acceptable reliability (.81).

Data Analysis

The Statistical Software Package for Social Sciences (version 24, IBM 2015) was used to calculate descriptive statistics and reliability estimates. The data was assessed for normality and tested for skewness and kurtosis using histograms and Pearson's skewness

index. Out of 31 items, values for six items fell slightly outside of the acceptable skewness range of -1 to +1: the most extreme skewness value was -1.235. Polit and Yang (2016) indicate that skewness criteria has not been determined for individual items and suggest that values greater than 2.0 indicate the data is extremely skewed. Likewise, 12 items exceeded the -1 to +1 range for kurtosis with values ranging from -1.231 to +1.793. Bimodal data distribution patterns were observed for LEB12 and Total LEB. Multimodal patterns were evident for the participation in decision-making subscale and Total Interprofessional Collaboration. Missing values were examined for each item. The volume of missing values was acceptable at < 5% (Kline, 2016). LEB7 and NAE2 had the maximum number of missing values (10) which equates to 2.09% of missing data for each item. Little's MCAR test was not significant (Chi-square = 600.75, p = .151) indicating most missing values were missing completely at random; however, a few systematic patterns were identified. To illustrate, seven participants did not answer any LEB questions. Of these, three participants did not answer the self-efficacy questions. Missing data were identified using a missing code. In MPlus full information maximum likelihood estimation (FIML) deals with missing data by using complete and incomplete cases to estimate the values for SEM.

The hypothesized model was tested using structural equation modelling techniques. First, the measurement model for the 16-item LEB scale was tested using confirmatory factor analysis (CFA) in MPlus (version 7.2, Muthén & Muthén 1998-2015). This analysis confirmed alignment with the five-factor structure of Hui's (1994) 16-item LEB scale. Next, maximum likelihood estimation was employed to test the direct and indirect effects of independent variables on dependant variables. The five LEB subscales containing 16 items (Hui, 1994) were used to promote a parsimonious model

(Kelloway, 2015). Parcelling techniques were not used for the self-efficacy (three items), IPC (five items), nurse-assessed adverse events (four items) and job turnover intentions (three items) scales due to the small numbers of items in these scales and absence of psychometric testing of these scales in this research (Kelloway, 2015; Little, Cunningham, & Widaman, 2002). Fit indices were examined to assess the fit of the data to the proposed model (Kline, 2016). The chi-square test indicates a difference between the observed and hypothesized models; thus, a small non-significant chi-square indicates a good fit with the data. However, as sample size increases the chi-square test is more likely to indicate a significant result. Thus, the chi-square result must be considered in conjunction with other fit indices (Kelloway, 2015). The Root Mean Square Error of Approximation (RMSEA: <.10) is less sensitive to sample size than the chi-square test with values of .05 or .06 considered a close fit with the data. Steiger (1990) recommended .10 indicates a good fit to the data and values less than .05 indicate a very good fit to the data. Other researchers have recommended values of .06 or less (Hu & Bentler, 1999) and .08 for acceptable fit to the data (MacCallum, Browne, & Sugawara, 1996). 95% confidence intervals were also generated for the estimated RMSEA value for use with the PCLOSE test of close fit (Kelloway, 2015). The PCLOSE test of the confidence intervals for the RMSEA result indicates whether or not the data is significantly different from the recommended .05 RMSEA value (very good fit to the data) as suggested by Steiger (1990).The comparative fit index (CFI) and Tucker-Lewis index (TLI) both indicate relative fit between the observed and hypothesized models. Both indices range between 0 and 1, with values exceeding .95 indicating good fit with the data. Finally, the Standardized Root Mean Square Residual (SRMR) ranges between 0 and 1, with values less than .08 indicating the model is a good fit (Kelloway, 2015).

Indirect effects were estimated using bootstrapping procedures in MPlus. To determine if indirect effects exist, confidence intervals for the coefficients are examined. Values that do not cross zero indicate a significant indirect effect (Kelloway, 2015).

Results

Descriptive Statistics

A summary of participant demographics can be found in Table 4.2. Most participants were female (91.6%) with an average age of 45.6 years (*S.D.* = 11.1) and educated at the college nursing diploma (41.3%) or BScN level (50.5%). All participants identified with one province only Alberta (31.8%), Ontario (33.5%), and Nova Scotia (34.7%), with most working full time (54.9%). Participants reported working 20.3 years (*S.D.* = 11.8) as a registered nurse, 14.8 years (*S.D.* = 10.3) at their current organization, and 9.8 years (*S.D.* = 8.3) on their current unit. Medical surgical (42%) and critical care (29%) were most frequently cited as participants' current speciality area of practice.

The total LEB scale mean value was 4.45 (*S.D.* = 1.38). Mean values for LEB subscales and the study variables are presented in Table 4.3, and ranged from moderate, $M = 3.99$, $SD = 1.71$ (Participation in Decision-Making) to high $M = 5.31$, $SD = 1.38$ (Confidence in High Performance). Participants' scores were high for self-efficacy ($M = 4.80$, $SD = 0.83$) and interprofessional collaboration ($M = 3.83$, $SD = 0.79$). Job turnover intentions and nurse-assessed adverse patient events were both low at 2.14 ($SD = 1.06$) and 2.04 ($SD = 0.64$), respectively. Small positive correlations were found between age and self-efficacy (.211, $p < .01$) and between RN years of experience and self-efficacy (.207, $p < .01$). However, there were no significant relationships between the demographic characteristics of age and experience as a nurse, in the organization or on the unit, and job turnover intentions or nurse-assessed adverse events.

Table 4.2

Demographic Characteristics (*N* = 478): *Means, Standard Deviations and Frequencies*

Means		***M* (Range)**	***SD***
Age		45.6 (24-73)	11.1
Number of Years	Experience as RN	20.3 (2 - 49)	11.8
	Current Organization	14.8 (.1 - 42)	10.3
	Current Unit	9.8 (.1 - 42)	8.3
Frequencies		***n***	***%***
Gender	Female	438	91.6
	Male	40	8.4
Highest Degree	BScN	241	50.5
	MScN	39	8.2
	College Diploma	197	41.3
Employment Status	Full Time	259	54.9
	Part Time	170	36
	Casual	43	9.1
Unit Specialty	Medical-Surgical	200	42
	Critical Care	138	29
	Maternal-Child	62	13
	Community Health	45	9.5
	Mental Health	27	5.7
	Other	4	0.8
Province	Alberta	152	31.8
	Nova Scotia	166	34.7
	Ontario	160	33.5

Table 4.3

Means, Standard Deviations and Pearson's Correlations for Study Variables

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1	Meaningfulness of Work	4.33	1.60	-								
2	Participation in Decision-Making	3.99	1.71	.75**	-							
3	Confidence in High Performance	5.31	1.38	.62**	.68**	-						
4	Facilitating Goal Accomplishment	4.37	1.59	.82**	.80**	.69**	-					
5	Providing Autonomy from Constraints	4.33	1.52	.67**	.76**	.67**	.76**	-				
6	Self-Efficacy	4.80	.83	.24**	.30**	.27**	.22**	.27**	-			
7	Interprofessional Collaboration	3.83	.79	.34**	.36**	.28**	.37**	.36**	.21**	-		
8	Job Turnover Intentions	2.14	1.06	-.26**	-.27**	-.26**	-.30**	-.24**	-.15**	-.30**	-	
9	Nurse-Assessed Adverse Pt Events	2.04	0.64	-.04	-.04`	-.06	-.08	-.09	-.07	-.18**	.19**	-

**Significance p<.01

Measurement Model for the LEB Scale

To confirm the factor structure of Hui's 16-item LEB instrument, a one-factor model was compared to a five-factor model using confirmatory factor analysis techniques described by Kelloway (2015). Maximum likelihood estimation in MPlus (version 7.2, Muthén & Muthén 1998-2015) was utilized for both analyses and indicated the five-factor model provides a better fit with the data $\chi^2(94) = 415.33$, $p < .001$ than the one-factor model $\chi^2(104) = 1689.83$, $p < .001$. These goodness-o*f*-fit indices confirm the fit of the five subscales to the LEB dimensions identified by Hui (1994) (Table 4.4). Standardized factor loadings for the latent measures were statistically significant and of substantial magnitude ranging from 0.58-0.92 (Table 4.5), providing support for the measurement model. There were no unreasonable parameter estimates, such as negative variances or correlations greater than one, and all appeared to be in the expected range of values.

Table 4.4

Confirmatory Factor Analysis - Fit Indices for the One-Factor and Five-Factor Models

Model	Chi-square (df)	RMSEA (Confidence Intervals)	CFI	TLI	SRMR
One-Factor	1,689.83 (104)	.18(.172,.188)	.80	.77	.07
Five-Factor	415.33 (94)	.09 (.077, .094)	.96	.95	.04

Table 4.5

Item and Subscale Factor Loadings for Study Variables

Variable	Item/ Subscale	*Unstandardized* *B*	*SE*	*Standardized* *B*	*SE*	*t*	*p*	
Leader Empowering Behaviour	MLEB	1.000	.000	.853	.015	58.267	<.001	
	PLEB	1.103	.044	.882	.013	69.681	<.001	
	CLEB	.768	.039	.761	.021	35.865	<.001	
	GLEB	1.062	.039	.918	.010	90.661	<.001	
	ALEB	.933	.041	.836	.016	52.400	<.001	
Self-Efficacy	SE1	1.000	.000	.831	.024	34.674	<.001	
	SE2	1.201	.069	.921	.023	40.799	<.001	
	SE3	.854	.065	.588	.034	17.33	<.001	
IPC	IPC1	1.000	.000	.807	.020	39.767	<.001	0.000
	IPC2	1.050	.051	.838	.018	45.489	<.001	
	IPC3	.851	.049	.765	.023	33.540	<.001	
	IPC4	.890	.049	.795	.021	37.780	<.001	
	IPC5	.877	.064	.636	.031	20.536	<.001	
Nurse-Assessed Adverse Pt Events	NAE1	1.000	.000	.659	.037	17.967	<.001	
	NAE2	.973	.100	.583	.040	14.755	<.001	
	NAE3	1.186	.112	.654	.037	17.851	<.001	
	NAE4	1.299	.123	.710	.035	20.205	<.001	
Job Turnover Intentions	JTO1	1.000	.000	.796	.027	30.029	<.001	
	JTO2	.893	.062	.701	.030	23.564	<.001	
	JTO3R	.851	.056	.818	.026	31.462	<.001	

Testing the Hypothesized Study Model

Model fit indices indicated that the model fit the data well (Figure 4.3): $\chi^2(164) = 333.02$, $p < .001$; RMSEA = .05 with a PCLOSE value of .773 indicating the estimated value was not significantly different to the .05 threshold for a very good fit with the data (Steiger, 1990); CFI = .96; TLI = .96; SRMR = .05. All paths were significant ($p<.001$) and in hypothesized directions, except for the relationship between self-efficacy and IPC, which was in the hypothesized direction (positive) but not significant. Thus hypothesis 2 was not supported. LEB had a positive relationship with self-efficacy and IPC, supporting hypotheses 1 and 3. Negative relationships were seen between IPC and nurse-assessed adverse events, as well as IPC and job turnover intentions, supporting hypotheses 4 and 5 (Figure 4.3). Indirect effects were observed (Table 4.6). LEB exhibited an indirect effect through IPC on nurse-assessed adverse events (β = -.091; 95% *CI*: -.162, -.044), and job turnover intentions (β = -.142; 95% *CI*: -.229, -.085). However, an indirect effect of LEB on IPC through self-efficacy was not observed (β = .023; 95% *CI*: -.016, .062).

Discussion

The aim of this study was to test a model examining the effects of LEB on experienced nurses' self-efficacy, interprofessional collaboration, subsequent intention to leave their positions and nurse perceptions of adverse patient outcomes. Findings support theories from Conger & Kanungo (1988) and Hui (1994) regarding the positive effects of empowering leader behaviour and add to the empirical literature by confirming the impact of LEB on self-efficacy, IPC, nurse-assessed adverse events and turnover intentions.

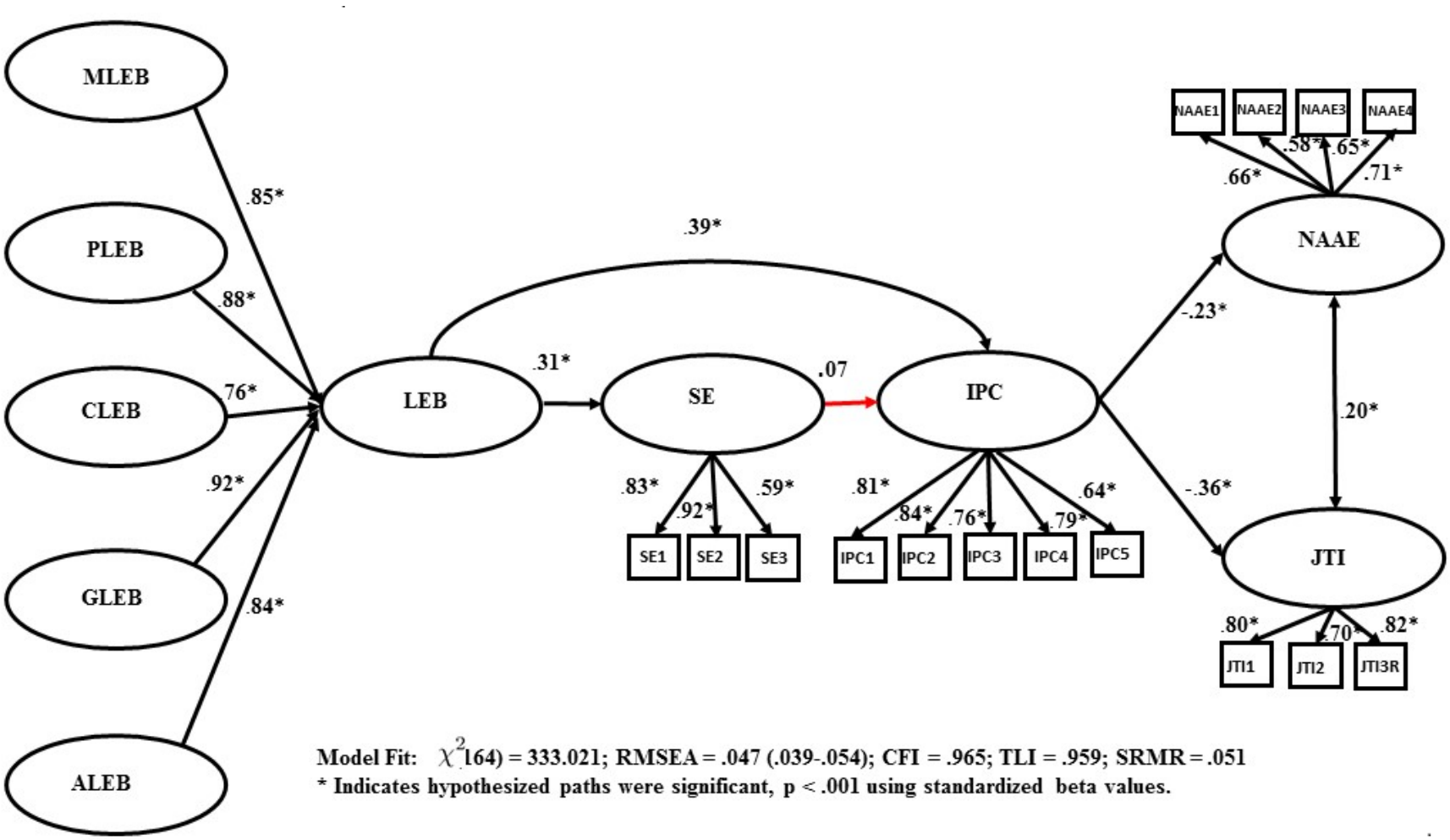

Figure 4.3. Final Model

Table 4.6

Unstandardized and Standardized Direct, Total and Specific Indirect Effects for Final Model

	Unstandardized β	**Standardized β**	***SE***	***P***	**95% Standardized CI (lower bound)**	**95% Standardized CI (upper bound)**
Direct Effects						
LEB --> SE	.170**	.314**	.046	.001	.219	.410
SE --> IPC	.078	.073	.051	.151	-.046	.184
LEB --> IPC	.229**	.395**	.046	.001	.259	.512
IPC --> NAAEpt	-.145**	-.230**	.054	.001	-.349	-.108
IPC --> Job Turnover Intentions	-.476**	-.360**	.048	.001	-.461	-.254
Leader Empowering Behavior to IPC						
Total Indirect Effect						
LEB --> Self-Efficacy --> IPC	.013	.023	.020	.248	-.016	.062
Leader Empowering Behavior to Nurse-Assessed Adverse Patient Events						
Total Indirect Effect	-.035**	-.096**	.030	.001	-.162	-.044
Specific Indirect Effects						
LEB --> IPC --> NAAEpt	-.033**	.091**	.030	.002	-.159	-.040
LEB --> SE --> IPC --> NAAEpt	-.002	-.005	.005	.269	-.017	.002
Leader Empowering Behaviour to Job Turnover Intentions						
Total Indirect Effect	-.115**	-.150**	.037	.001	-.229	-.085
Specific Indirect Effects						
LEB --> IPC --> Job Turnover Intentions	-.109**	-.142**	.037	.001	-.223	-.076
LEB --> SE --> IPC -->Job Turnover Intentions	-.006	-.008	.007	.250	-.024	.004

Note: All values are significant at the p<.001 level

The direct positive relationship between LEB and IPC is a new empirical finding that aligns with previous research confirming the leader's role in creating team environments. In the management literature, a study by Lorinkova, Pearsall and Sims (2013) indicated that in the early phases of their longitudinal study, directive leadership styles achieved higher team performance. However, over time the teams led by empowering leaders achieved higher levels of performance due to increased levels of learning, coordination, and empowerment. In the nursing literature, relational leadership practices and structural empowerment were identified as important positive factors in promoting IPC in a cross-sectional study of new graduate nurses (Laschinger & Smith, 2013). Building on this evidence, Regan, Laschinger and Wong (2016) analyzed data from a cross-sectional study of experienced staff nurses in Ontario and concluded that authentic leadership, structural empowerment, and a professional practice milieu promote IPC.

Leaders who demonstrate supportive management practices and create empowering work environments also foster collaborative relationships between healthcare professionals and improved staff nurse outcomes (Schmalenberg & Kramer, 2008; Shirey, 2010; WHO, 2010). The culture of the work environment has been identified as a key strategy in achieving collaborative practice environments (WHO, 2010). Such environments promote sharing of care responsibilities by professionals, knowledge of IPC, mutual trust and respect, as well as good communication processes (Clark & Greenwald, 2013; Martin-Rodriguez, Beaulieu, D'Amour, & Ferrada-Videla, 2005). Practically, this includes establishing communication, conflict resolution, and shared decision-making processes (WHO, 2010). The nurse manager at the unit level is in a pivotal position to support such processes, as well as promoting understanding and

valuing of other professionals' roles, reinforcing the positive impact of collaboration, smoothing hierarchical differences among professions, and supporting effective communication practices (Laschinger & Smith, 2013; Orchard, 2010).

While LEB was positively and directly associated with self-efficacy and IPC, a significant indirect effect of LEB on IPC through self-efficacy was not found in this study of experienced staff nurses. In addition, the relationship between self-efficacy and IPC was in the predicted direction but did not reach significance. The average self-efficacy score was high for these participants (M = 4.80, $SD = 0.83$). Conceivably, experienced nurses' perceptions of IPC are mediated by other factors, such as established relationships with interprofessional team members. LEB may also be associated with IPC through other mechanisms. Professional practice environments which support nurses' control over practice, their involvement in patient care decisions, and enhance nurses' perceptions of relationships with team members, including physicians, may influence the LEB-IPC relationship (Lake, 2002; Lake 2007; Regan, Laschinger & Wong, 2016). Structural empowerment offers another potential mediation mechanism. Structural empowerment has been linked to both LEB and interprofessional collaboration in recent nursing research studies (Cziraki & Laschinger, 2014; Greco, Laschinger & Wong, 2006; Regan, Laschinger & Wong, 2016).

This secondary analysis focused on experienced nurses with an average age of 45.6 years (*range*: 24 – 73 years) and 20.29 years of RN experience (*range:* 2-49 years). It is possible that age or experience play a role in the development of nurses' self-efficacy and perceptions of LEB. In this research, a small positive correlation was found between age and self-efficacy (.211, $p < .01$). Likewise, a small positive correlation was observed between total RN years of experience and self-efficacy (.207, $p < .01$). Younger or lesser

experienced nurses in this sample may not yet have fully developed their self-efficacy in the workplace, which may have influenced the self-efficacy results in this research. Ahearne, Mathieu and Rapp (2005) examined the influence of LEB on 231 salespeople's self-efficacy. Results indicated that junior sales staff benefitted most from empowering leader behaviour. Furthermore, Lee, Willis, and Tan (2016) reported the positive impact of empowering leadership on task performance with low tenure employees in their meta-analysis. Applied here, when inexperienced nurses are exposed to a nurse manager who demonstrates LEB, role models respect and understanding of all professionals' roles, and creates the conditions for interprofessional collaboration, the novice nurse's belief and ability to interact and work with interprofessional team members will be enhanced. Thus, follow-up research with more novice and less experienced nurse populations is warranted.

The mean frequency of nurse-assessed adverse events in this research was similar to findings from the systematic review of the literature by Wong et al., (2013). These researchers concluded that positive relational leadership behaviour is negatively associated with lower patient mortality, medication errors, use of restraints, and hospital acquired infections. Further, Wong and Giallonardo (2013) found that higher levels of authentic leadership were related to lower perceptions of nurse-assessed adverse patient outcomes. What remains largely unknown is how relational leadership styles influence patient outcomes (Wong et al., 2013). This research has uncovered one mediation mechanism in the LEB-nurse-assessed adverse events through IPC. Research is required to uncover other mediation and interaction effects and determine specific leader behaviours that reduce adverse patient events, such as adequate staffing levels and resources to prevent negative outcomes (Wong et al., 2013). The link between what was

observed here using cross-sectional observational data and what might be found using longitudinal objective data also needs to be examined.

LEB was indirectly associated with nurse-assessed adverse events and job turnover intentions through IPC, and the direct relationships between both IPC and nurse-assessed adverse patient events and IPC and job turnover intentions. It is not surprising that nurses who work in supportive and collaborative environments experience greater decision-making and problem-solving capacity when working with nursing and interprofessional team members. In turn, this influences how they perceive their ability to address patient safety situations, and ultimately their desire to remain working in their units. These findings reinforce the positive influence of relational leadership on work environments and aligns our findings with other studies that have pointed to the positive impact of interprofessional communication practices and team work on healthy work environments, provider satisfaction, staff turnover and vacancy rates (Abbott et al., 1994; Kalisch et al., 2007; Laschinger & Smith, 2013; Regan et al., 2016; Suter et al., 2012).

The findings in the current study support previous empirical data concerning the effects of relational leadership styles on unit, program and organizational outcomes (Cummings et al., 2018;). Greco et al. (2006), in a cross-sectional study of 500 staff nurses in Ontario acute care hospitals, determined that LEB can enhance person-job fit and increase work engagement. They highlighted the important role that leader behaviour plays in creating healthy workplaces that address unreasonable workloads, control over work, acknowledge staff nurses' contributions, and promote healthy relationships, fairness, and alignment between employee and organizational values. Aiken et al. (2011) concluded that supportive professional practice environments, found in Magnet hospitals with strong supportive leadership, were associated with higher nurse retention. As well,

authentic leadership has been positively linked to healthy workplace conditions that promote new graduate nurse retention (Laschinger et al, 2012). Finally, superior working conditions and organizational characteristics, such as group cohesion and LEB have also been found to decrease turnover intention (Beecroft, Dorey & Wenten, 2008).

Implications for Management

Our study findings underscore the critical role nurse leaders play in creating collaborative environments that support all interprofessional team members. Nurse leader behaviour can promote positive outcomes during healthcare system change, including quality patient care and stabilization of the nursing workforce (Cummings et al., 2018; Wong et al., 2013). The selection, development and ongoing support of nurse leaders is therefore imperative (Lee et al., 2016). Job postings and interview questions should articulate clear expectations for empowering leader behaviour that promote collaborative environments. Annual performance management systems with feedback from staff regarding nurse leader LEB is an opportunity for organizations to reinforce expected behaviour.

The means of the LEB subscale means ranged from 3.99 (*SD* = 1.71) for the Participation in Decision-Making subscale to 5.31 (*SD* = 1.38) for the Confidence in High Performance subscale, aligning with findings from Laschinger et al. (1999) and Greco et al. (2006) research studies. Nurses in the current study scored their managers' LEB at a high level for expressing confidence in their performance; yet these nurses also indicated only moderate engagement in decision-making. The LEB subscale participation in decision-making included three items: provides many opportunities for me to express my opinion (*M* = 4.44, *SD* = 1.87); often consults me on work issues (*M* = 3.97, *SD* = 1.92); and makes many decisions with me (*M* = 3.55, *SD* = 1.87). Conceivably,

participants perceive they can voice their support, ideas, or concerns in the workplace but feel disconnected from their nurse manager with regards to decision-making. Feeling disengaged from decision-making processes with the manager may be explained by the nature of nursing work; whereby patient care decisions are made every day, evening and night without the involvement of the nurse manager. On the other hand, participants may not have felt included in decisions regarding unit operations or workflows. Nurse involvement in decision-making has been linked in the Magnet hospital studies to healthy work environments. Such work environments, where nurses are empowered to achieve goals and be involved in participatory decision-making, have been associated with higher nurse attraction rates and retention rates (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). Regularly involving nurses in decision-making about unit operations during staff meetings and daily huddles (brief unit meetings) is a strategy that nurse managers can use to stabilize the nursing workforce.

Academic institutions should consider graduate nurse leader programs that incorporate LEB and IPC theory, and knowledge of all interprofessional team member roles, as well as practical strategies and exemplars from nurse leaders who have achieved improved outcomes. Such formal programs will emphasize expected knowledge and skills, while bolstering nursing leadership as a distinct speciality. Further, interprofessional education programs for undergraduate (student nurses) and post graduate education programs (nurses and managers) should be considered. Interprofessional training has been linked to an increased sense of self-efficacy among students from nursing, medicine, physiotherapy, occupational therapy, laboratory technology and radiology (Norgaard et al., 2013). This collaborative approach to education may increase understanding of other team members' roles, ultimately

contributing to interprofessional collaboration in the workplace (Orchard, 2005). Finally, future researchers may examine how nurse manager span of control impacts LEB and their capacity to enact their roles (Wong et al., 2015). Nurse managers who have the capacity to routinely demonstrate relational leadership styles such as LEB in their practice, will realize enhanced patient, staff and unit outcomes (Cummings et al., 2018).

Limitations

Data collection in cross-sectional designs is limited to one point in time; thus, changes over time cannot be inferred. While the use of a theoretical framework, large sample size and structural equation modeling techniques helped to somewhat offset this limitation in part (Polit & Beck, 2012), future longitudinal studies with multiple data collection points and interventional study designs are warranted to examine more rigorously the causal relationships between LEB, SE, IPC, nurse and patient outcomes. The model in this study was limited to five variables. There are many other factors in participants' workplaces that are not accounted for in this research, such as the nurse managers' span of control and staffing levels that may explain or contribute to how LEB influences the dependent variables (Wong et al., 2013). In light of the cross-sectional study design it is conceivable that alternative models exist where variables are ordered differently. For example, the collaborative conditions of IPC may have an interaction effect which in turn influences the relationships among LEB, SE, nurse and patient outcomes. Alternatively, the collaborative conditions of IPC may be an antecedent of nurse manager's LEB (Cheong et al., 2016).

Common method variance is another limitation of this study (Polit & Beck, 2012). Only one data source (self-report of nurses) was used, limiting analysis and interpretation of findings. Future studies could include additional data sources, such as surveying nurse

managers and their supervisors, and members of the interprofessional team, including physicians. This may provide a more holistic view of relationships among variables and further inform our understanding of the empowerment process and collaborative practice. A strength of this study concerned the use of reliable and valid instruments in the survey that have been previously utilized in nursing research studies. However, Polit and Yang (2016) note that response biases such as social desirability or acquiescence may be found in self-report questionnaires. Polit and Yang (2016) recommend the use of anonymous, written methods to address social desirability bias, and instrument testing (i.e. pretesting, interviews) to identify potential problems related to acquiescence response set bias.

A strength of this cross-sectional study was a sampling strategy with clear inclusion and exclusion criteria. The associated limitation was a relatively equal number of participants from Alberta, Nova Scotia, and Ontario; thus, provinces with smaller populations of nurses (e.g. Nova Scotia and Alberta) were overrepresented in the study sample. Although the sample size in this research study was large, future researchers may consider proportional random sampling or weighted sampling techniques to include or adjust for the appropriate distribution of participants from each province (Polit & Beck, 2012).

Cheong et al., (2019) in their review of the effectiveness of empowering literature, state relational leadership styles are more effective when enacted by female leaders. Future research should examine whether or not the gender of the leader impacts the study variables. Participants in this study worked in hospital settings. Future research may include other types of healthcare settings such as the community and long-term care to determine if there are differences due to healthcare sector. Although the response rate was low at 39.8% the sample size was sufficient for the statistical analysis. Given that

data collection was limited to experienced staff nurses in three Canadian provinces, the findings can only be generalized to nursing populations in those provinces.

From a practical standpoint, self-reported assessments of clinical outcomes such as patient adverse events have been criticized due to their potential for bias (Singer et al., 2009). However, other researchers point to challenges with accessing organizational databases or lack of regular reporting of outcome data and have instead relied on nurse-reported assessment data (Wong & Giallonardo, 2013). Still other researchers have reported significant correlations between nurse assessments of falls with injury and hospital data bases (Cina-Tschumi et al., 2008). Clearly, further work is needed to improve access and accuracy of organizational reporting mechanisms.

Future Research

Future research to understand the effects of LEB may explore relationships between LEB and a variety of nurse, patient and unit outcomes. Increasing interest in IPC as an effective strategy to address patient, provider, organizational and system outcomes as well as health workforce shortages warrants further research that examines the impact of LEB on outcomes such as burnout, satisfaction with the leader, patient safety climate and team conditions (Regan et al., 2016; WHO, 2010) . The impact of LEB on all members of the interprofessional team, including physicians, is a gap in the literature that demands further attention. Longitudinal designs that explore changes over time are necessary to establish causality. In addition, organizational systems to measure patient outcomes accurately are warranted. Research designs need to consider the length of time nurses and team members are exposed to the same nurse manager. It is conceivable that nurses may work for more than one manager on a unit or change positions to another unit with a new nurse manager and interprofessional team. Mixed methods, using quantitative

and qualitative methods, provide opportunities to further investigate how nurse LEB motivates nurses and other members of the team.

The impact of nurse manager span of control on relational leadership styles such as LEB also warrants attention (Cummings et al., 2010). Leadership takes time; nurse managers must have reasonable workloads which allows time to demonstrate empowering leader behaviours and create collaborative working environments (Shirey, Fisher, McDaniel, Doebbeling, & Ebright, 2010; Warshawsky & Havens, 2014). Determining the optimal span of control needed to enhance outcomes would assist healthcare organizations with human resources and financial planning.

This research focused on empowerment at the individual level of analysis. Future research may examine empowerment at the individual, team and organizational levels as well (Cheong et al., 2019). Scholars argue employees may experience empowerment differently depending on the level of analysis (Cheong et al., 2019). For example, nurses may feel empowered at the organization level, but not at the individual or team levels. In their meta-analysis of empowering leadership, mediation and moderation effects, Lee et al. (2016) observed that task performance was significant and positive in situations where empowering leadership was experienced from a vertical (organizational level perspective), and non-significant in horizontal-individualistic (individual, team level perspectives). New instruments are needed to measure such differences and enhance our overall understanding of empowerment in the nursing field (Friend & Sieloff, 2018). Such findings may inform healthcare organization strategies and practices (e.g. communication, change management).

Additional research to examine how LEB influences outcomes such as interprofessional collaboration is required. In this case, the influence of professional

practice environments or structural empowerment as mediators or interaction (moderator) mechanisms may shed light on our understanding of empowerment. Trust in the leader and leader-member exchange, and how these mediate the LEB-IPC relationship are also worthy of further examination. Lee et al. (2016) in their meta-analysis concluded that both trust and leader-member exchange act as mediators for empowering leadership. They attributed this to the provision of growth and development opportunities by the leader, that are perceived as favourable by the employee. Lee and colleagues recommend examining empowering leadership that brings about psychological empowerment, trust in the leader and leader-member exchange (Lee et al., 2016).

Conclusion

Our findings confirm the importance of empowering leader behaviour in supporting nursing staff in the current healthcare environment. The creation of collaborative interprofessional environments offers a mechanism for understanding the effects of nursing leadership on work environments and in turn, staff and patient outcomes. Policy makers, educators, and administrators at the system, academic, and hospital levels may consider strategies to reinforce the importance of LEB in nurse manager selection processes and professional development programs. Future replication of this study with the novice nurse population is recommended to explore the motivational mechanism of LEB on staff nurse and patient outcomes through self-efficacy.

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CHAPTER V: STUDY SUMMARY AND IMPLICATIONS

In the final chapter of this dissertation, the conceptual model of the study is reviewed and then an overview of the analyses and study findings that were conducted in Chapters Three and Four is provided. This is followed by the implications of this research for nursing practice, education, future research and policy, as well as a discussion regarding the importance of LEB in the current healthcare environment.

Conceptual Model

The theoretical framework of a research study serves as the foundation; thus, careful selection of an appropriate theory is paramount (Pedhazur & Schmelkin, 1991). While the association of positive relational leadership styles with nurse and patient outcomes has been confirmed in the nursing literature (Cummings et al., 2018; Wong, Cummings, & Ducharme, 2013), there is limited research and understanding as to how leadership influences these outcomes (Cummings et al., 2018; Wong et al., 2013). The Process Model of Empowerment (Conger & Kanungo, 1988), built on the notion that leadership is motivational in nature, posits empowering leader behaviour reduces conditions of powerlessness, and enhances employee self-efficacy and the sharing of power with employees. Hui (1994) further developed Conger and Kanungo's (1988) Process Model of Empowerment by reviewing the literature and providing definitions for five leader empowering behaviours (LEB); specifically, enhancing the meaningfulness of work, fostering participation in decision making, expressing confidence in high performance, facilitating goal accomplishment, and providing autonomy from bureaucratic constraints. Hui's (1994) LEB incorporated minor wording changes from Conger and Kanungo's (1988) work and added the facilitating goal accomplishment LEB. The purpose of this dissertation study was to examine relationships among leader

empowering behaviour (LEB), self-efficacy, interprofessional collaboration, nurse-assessed adverse events and job turnover intentions. Thus, testing the motivational effects of LEB using Conger and Kanungo's (1988) and Hui's (1994) theoretical frameworks was a logical fit to this research study.

Over the last two decades, interest in the ways interprofessional teams work together to optimize patient outcomes has grown (Regan, Laschinger, & Wong, 2016). Known as interprofessional collaboration, this philosophy of care delivery has attracted even greater interest given the promise of improved organizational and system outcomes, as well as the opportunity to address health workforce shortages (World Health Organization, 2010, 2013, 2019). Nurses are increasingly expected to lead interprofessional teams and coordinate care with a variety of nursing and non-nursing healthcare providers (Canadian Nurses' Association, 2015). Given the current interest in interprofessional collaboration, examination of leader behaviours that increase nurse self-efficacy and support nurses to enact their roles as coordinators of care is key to the delivery of quality patient care. Conger and Kanungo's (1988) and Hui's (1994) theories provided an appropriate theoretical foundation to test these relationships.

Methods

This study was a secondary analysis of data from the *Authentic Leadership for New Graduate Nurses Success* (ALGN) study authored by Laschinger, Wong, Finegan, and Fida (2015). A non-experimental, predictive survey design was used to test the hypothesized model with experienced nurses (three or more years of experience) from three Canadian provinces (Alberta, Ontario, Nova Scotia). Following ethics approval, survey packages were sent to 1,200 randomly selected participants with 478 completed questionnaires collected (response rate 39.8%). This sample size exceeded the minimum

sample size of 200 for structural modelling techniques (Kline, 2016). For the measurement model, confirmatory factor analysis was conducted to determine whether Hui's (1994) adapted 16-item instrument aligned with Hui's original five-factor model. Following this validation test, the hypothesized structural model was tested using maximum likelihood estimation and structural equation modeling techniques. Indirect effects were computed using bootstrapping processes with analysis of confidence intervals.

The research questionnaire for this study incorporated reliable and valid measures. All scales were short, ranging from three to sixteen items. Hui's (1994) original (27-item) LEB instrument has been used in several nursing research studies. Laschinger, Wong, McMahon, and Kaufmann (1999) reported acceptable Cronbach alpha values of .77 to .95, except for the subscale Autonomy from Bureaucratic Constraints which had a value of .63; Greco, Laschinger, and Wong (2006) reported similar findings indicating values ranging from .64 for Fostering Autonomy, to .87 to .97 for the remaining four subscales; and Meyer-Bratt, Broome, Kelber, and Lostocco (2000) reported Cronbach alpha values of .67 to .95 for all subscales. In this study, Hui's (1994) adapted 16-item instrument yielded Cronbach alpha values for the LEB subscales ranging from .87 to .96 and a total LEB scale score of .97. The reliability values in this analysis are higher than those reported by previous nursing researchers who used the longer (27-item) version of the instrument (Greco et al., 2006; Laschinger et al., 1999; Meyer-Bratt et al. 2000). Similarly, Siu (2015), who also used Hui's (1994) adapted 16-item LEB instrument in a nursing sample, reported high Cronbach alpha values ranging from .71 to .90 for the five LEB subscales. Polit and Yang (2016) note longer scales are generally accepted to have higher internal consistency than shorter scales. The increased reliability results of the

shorter 16-item scale in this study may be attributed to minor wording changes of the LEB items used in the *Authentic Leadership for New Graduate Nurse Success* questionnaire by Laschinger et al. (2015) making them more applicable to nursing work.

Psychometric properties of Ahearne, Mathieu and Rapp's (2005) LEB instrument were reviewed and compared with Hui's (1994) LEB scale as part of this dissertation work. The content validity of Ahearne et al.'s (2005) instrument was acceptable with linkages back to both Conger and Kanungo's (1988) and Hui's (1994) works. The development of the instrument engaged experts with incorporation of four LEB domains (Ahearne et al., 2005); specifically, enhancing the meaningfulness of work, fostering participation in decision-making, expressing confidence in high performance and providing autonomy from bureaucratic constraints. The facilitating goal accomplishment LEB (fifth LEB added by Hui, 1994) was not included in this instrument. Given the focus of Ahearne et al., (2005) study on the psychological aspects of empowerment (self-efficacy, adaptability, employee readiness) rather than organizational outcomes, this may explain the LEB omission. However, for healthcare environments heavily focused on patient and unit outcomes, the omission of this LEB limits the use of Ahearne et al.'s (2005) LEB instrument in nursing research studies. With regards to construct validity, Ahearne et al., (2005) reported an exploratory factor analysis which yielded only one factor. Their report indicated the ten-item LEB instrument contained subscales (fostering participation in decision-making, expressing confidence in high performance) with only two items each, which may have impacted their exploratory and confirmatory factor analyses (Ahearne et al., 2005). Although there is no consensus in the literature regarding the required number of indicators for each factor, Anderson and Gerbing (1984) found convergence problems and incorrect CFA solutions when using only two indicators with

smaller sample sizes (less than 100). The use of three indicators in their Monte Carlo studies and sample sizes greater than 200 addressed these issues (Anderson & Gerbing, 1984). Thus, Kelloway (2015) recommends three indicators per factor, particularly for smaller sample sizes.

A review of Hui's (1994) unpublished dissertation report revealed the engagement of expert faculty members and senior PhD students in the development of his LEB instrument. Clear linkages to Conger and Kanungo's (1988) Process Model of Empowerment provided evidence of content validity. Construct validity was addressed through exploratory and confirmatory factor analyses which yielded a five-factor model and a reduced number of items from 27 to 16 (Hui, 1994). The 16-item instrument used in this research reflects the five LEB identified by Hui (1994) with four items in the enhancing the meaningful of work LEB subscale and three items in the remaining four LEB subscales. The psychometric reviews of Ahearne et al., (2005) and Hui's (1994) LEB instruments confirmed the suitability of Hui's LEB scale for use in this dissertation work due to the reliability, content and construct validity of this instrument, as compared to Ahearne et al.'s (2005) LEB instrument.

Results

The findings from this research study build on extant nursing empowerment literature, shedding light on how LEB and interprofessional collaboration enhance nurse and patient outcomes. The data was determined to be a good fit with the hypothesized structural model $\chi^2(164) = 333.021$, $p < .001$; RMSEA = .047; CFI = .965; TLI = .959; SRMR = .051. All hypothesized paths were found to be significant, with the exception of the path between self-efficacy and IPC, which was positive and in the hypothesized direction, but not significant. As expected, negative relationships were observed for the

relationship between interprofessional collaboration and nurse-assessed adverse events, as well as the relationship between interprofessional collaboration and job turnover intentions.

Indirect effects were also observed. LEB was indirectly associated with both nurse-assessed adverse events (β = -.091; 95% *CI*: -.162, -.044), and job turnover intentions (β = -.142; 95% *CI*: -.229, -.085) through interprofessional collaboration. Conversely, the indirect effect of LEB on IPC through self-efficacy was not significant in this study (β = .023; 95% *CI*: -.016, .062). These results provide support for the positive impact nurse manager LEB has on nurse and patient outcomes, as well as the mediating effects of interprofessional collaboration on the LEB to nurse-assessed adverse events and LEB to job turnover intentions relationships. The confirmatory factor analysis of Hui's (1994) 16-item LEB instrument supported Hui's original five-factor model (enhancing the meaningfulness of work, fostering participation in decision making, expressing confidence in high performance, facilitating goal accomplishment, and providing autonomy from bureaucratic constraints) and thus, strengthens the argument for the use of this shortened LEB instrument in nursing research studies. Polit and Yang (2016) noted there are benefits to using shorter scales related to reduced respondent burden, which in turn may positively impact recruitment, retention and overall research costs. The scales to measure interprofessional collaboration (five items), nurse-assessed adverse events (three items) and job turnover intentions (three items) included in the ALGN study survey were short; nonetheless, these scales met Kelloway's (2015) recommendations for the minimum number of three items to measure a latent variable.

Study Limitations

While the study findings shed new light on the influence of both empowering

leader behaviour and collaborative practice on nurse and patient outcomes, limitations of the study must be acknowledged. The first limitation concerns the study design. Cross-sectional studies are limited to one point in time; thus, causation cannot be inferred (Polit & Beck, 2012). Future analyses with longitudinal data and interventional study designs are warranted to examine the causal relationships between LEB, self-efficacy, interprofessional collaboration, and nurse and patient outcomes.

This research relied on one data source (self-report surveys of nurses), which may contribute to measurement error, thereby limiting analysis and interpretation of findings. To address this potential common method variance problem, use of additional data sources to capture other professionals' perspectives would add strength to this study. In addition, Polit and Yang (2016) noted response biases, such as social desirability response or acquiescence response set biases may be associated with the use of self-report questionnaires. These scholars recommend the use of anonymous, written methods to promote truthful responses and minimize social desirability bias (Polit & Yang, 2016). Instrument testing (i.e. pretesting, interviews) may be employed to identify and mitigate potential problems related to acquiescence response set bias (Polit & Yang, 2016).

While the sampling strategy incorporated clear inclusion and exclusion criteria, the sampling plan included equal numbers of participants from each of Alberta, Nova Scotia, and Ontario. Thus, representativeness may be limited in that provinces may have been under- (Ontario) or over-sampled (Alberta, Nova Scotia) the relative populations of experienced hospital registered nurses in each province. While this sample provided insight into the perspectives of nurses representing the western, central and eastern provinces of Canada, ideally all Canadian provinces and territories should be represented to support broad generalizability of findings across Canada. Since only experienced acute

care nurses with three or more years experience were sampled, generalizability is limited to that group.

Implications of Study Findings

This section is organized to address the implications of the study findings for nursing practice, education, research and policy.

Implications for Leadership Practice

Our results suggest that encouraging leader empowering behaviour to support staff amid organizational and system changes is critical; especially in light of increasing expectations for nurses to function autonomously as knowledge workers in interprofessional environments (Amundsen & Martinsen, 2014). In this research, LEB enhanced nurses' self-efficacy and interprofessional collaboration, and exhibited indirect effects on nurse-assessed adverse events and job turnover intentions through interprofessional collaboration. Based on a compilation of Hui's (1994) five LEB, we discuss below ways to provide nurse managers with concrete behaviours and practices to promote nurses as knowledge workers, while optimizing patient outcomes and retaining experienced nurses.

Interactions with nurses and interprofessional teams provide nurse managers with opportunities to operationalize LEB. Regular staff meetings, daily huddles, performance reviews, rounds and unit council meetings are all opportune times for the nurse manager to link best practices and research evidence to unit and organizational changes. Such interactions bring purpose and meaning to nurses' work (Dahinten, Lee, & MacPhee, 2016; Havens, Warshawsky, & Vasey, 2013; Lake, 2002); thereby, enhancing the meaningfulness of nursing work (Hui, 1994). During these interactions, the nurse manager may increase nurses' self-efficacy through modeling, verbal persuasion, and

tangible supports to nursing staff and the team at large (Bandura, 1977; Dahinten et al., 2016; Manojlovich, 2005). These forums also provide the opportunity to foster participation in decision-making LEB through idea generation, problem solving and decision-making, with the purpose of addressing imminent or proposed future changes (Bandura, 1977; Havens et al., 2013). Practices that engage staff in decision-making have been linked to nurse autonomy, control over the practice environment and structural empowerment in the magnet hospital literature (Kretzchmer et al., 2017).

Facilitating goal accomplishments (Hui, 1994) can be demonstrated by the nurse manager during regular formal meetings with individual nurses to review performance. Such meetings provide the nurse manager with the opportunity to identify necessary resources to enhance performance (Germain & Cummings, 2010). Follow-up interactions throughout the year may be required to reinforce expectations, address any barriers to performance, and provide additional resources if needed. Such interactions also provide an opportunity to acknowledge success and operationalize the expressing confidence in high performance LEB (Hui, 1994). This LEB can be demonstrated in individual, team settings and public forums through praise and recognition of one individual or the team. Recognition can be accomplished during staff forums and included in newsletters and quality presentations to senior executives. Nurse managers may use verbal persuasion and emotional or psychological arousal to encourage and support staff through challenging situations, such as patient and family dynamics, patient demise, and unexpected changes in workload (Bandura, 1977; Manojlovich, 2005). Hui's (1994) remaining LEB, providing autonomy from bureaucratic constraints, promotes effective and efficient nursing work through the simplification of details and rules. Working collaboratively with nursing staff to review workflows, unnecessary steps can be eliminated by those

closest and most knowledgeable about care delivery processes (Amundsen &Martinsen, 2014; Dahinten et al., 2016; Meyer-Bratt et al., 2000).

In this research, LEB was positively associated with self-efficacy; however, the LEB-interprofessional relationship was not mediated by self-efficacy as originally hypothesized. The population of interest in this research was the experienced nurse with an average age of 45.62 years (*range*: 24-73 years) and 20.29 years of RN experience (*range*: 2 – 49 years). Arguably, younger or lesser experienced nurses in this sample may not have fully developed self-efficacy in the workplace, thereby impacting the proposed indirect effect in the LEB-interprofessional collaboration relationship. Research studies in the empowering leadership literature indicate junior sales staff benefitted most from empowering leader behaviour (Ahearne, Mathieu & Rapp, 2005). Recently, Lee, Willis and Tan (2018) conducted a meta-analysis and reported the positive association of empowering leadership on task performance with low tenure employees. Thus, additional research with nurses who have less than three years of experience is warranted to explore the LEB, self-efficacy and interprofessional collaboration relationships.

The positive relationship between LEB and interprofessional collaboration was demonstrated in this study. This new empirical finding aligns with research linking collaborative environments and supportive management practices with improved nurse outcomes and interprofessional relationships (Friend & Sieloff, 2018; Kretzchmer et al., 2017; Schmalenberg & Kramer, 2008; Shirey, 2009; WHO, 2010). In addition, Lorinkova, Pearsall, and Sims' (2013) longitudinal study report indicated that over time teams led by empowering leaders achieved higher levels of performance than directive leaders. These researchers attributed this to increased levels of learning, coordination and empowerment within empowered teams. Likewise, in the nursing literature relational

leadership styles, structural empowerment and professional practice environments have been linked to the promotion of interprofessional collaboration (Laschinger & Smith, 2013; Regan, Laschinger, & Wong, 2016).

Nurse managers at the unit level are in a pivotal position to promote interprofessional collaboration through the creation and support of a workplace culture that values healthy working relationships (Crawford, Omery, & Seago, 2012; Orchard, Curran, & Kabene, 2005). Operationalization of LEB (Hui, 1994) and Bandura's (1977, 1993) sources of information with nurses and interprofessional team members are concrete ways for the nurse manager to promote collaborative practices through communication, collaboration, participative decision-making, trust, as well as role clarification and valuing of all roles (Kretzchmer et al., 2017; Orchard et al., 2005; Regan et al., 2016). Orchard et al., (2005) asserted that the creation of collaborative practice environments is accomplished through power sharing and shared decision-making, aligning well with the study findings and theoretical underpinnings of LEB (Hui, 1994).

Study findings included the negative relationship between interprofessional collaboration and nurse-assessed adverse events and an indirect association between LEB and nurse-assessed adverse events through interprofessional collaboration. These findings align with a systematic review of the literature by Wong et al., (2013), who reported positive relational leadership styles were negatively associated with a variety of patient outcomes including mortality, medication errors, restraints use, and nosocomial infections. In another study, Wong and Giallonardo (2013) concluded that authentic leadership was inversely related to nurse-assessed patient outcomes. The mechanism as to how leadership influences outcomes is largely unexplained in the literature (Wong et al., 2013). However, this research has illuminated that LEB may influence nurse-assessed

adverse events through the facilitation of interprofessional collaboration in the workplace.

As hypothesized, a negative association between interprofessional collaboration and job turnover intentions and an indirect relationship between LEB and job turnover intentions through interprofessional collaboration were found in this study. In the nursing literature, nurse manager LEB has been associated with the creation of healthy workplaces where workload, control over work, acknowledgement of nurses' contributions and the promotion of healthy work relationships are addressed (Greco et al., 2006; MacPhee et al., 2014). Further, Aiken et al., (2011) reported strong supportive leadership in Magnet hospitals was linked to higher nurse retention. Regarding the role of interprofessional collaboration as a mediator, superior working conditions and organizational characteristics such as team cohesion and empowering leader behaviour have also been linked to decreased turnover intentions (Beecroft, Dorey, & Wenten, 2008). The findings from the current study underscore the importance of research to understand how leadership styles influence outcomes. In particular, the role of the nurse manager in the creation of interprofessional collaborative environments warrants further attention.

Examination of the LEB subscale means revealed that the participation in decision-making LEB was scored lowest by participants at 3.99. This suggests nurses in this sample perceived limited opportunities to be involved with decision-making, aligning with Laschinger et al.'s (1999) and Greco et al.'s (2006) findings. Magnet hospital literature has linked healthy work environments where participatory decision-making is supported to higher attraction and retention rates (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Aiken, Sloane, Lake, Sochalski, & Weber, 1999). Enactment of the

participation in decision-making LEB by nurse managers during staff meetings and daily unit meetings such as huddles is recommended as a strategy to stabilize the nursing workforce and retain experienced nurses in the hospital setting (Dahinten et al., 2016). Ensuring adequately staffed units and conducting regularly scheduled meetings are two strategies that the nurse manager may employ to increase nurse participation (Bacon, Lee, & Mark, 2015).

Examination of the LEB parameter estimates in the measurement model revealed the parameter estimate for LEB15 "Allows me to do my job my way" loaded on to the Providing Autonomy from Bureaucratic Constraints factor (.77) and exhibited the lowest R^2 value of .59 when compared to all other items. A possible explanation for this R^2 (square of the loading) value is that nurses perceive limited opportunities to practise nursing in their way, due to professional regulations, legislation, organizational hierarchies and policies (Manojlovich, 2007). Conversely, as knowledge workers, nurses must be autonomous independent decision-makers (Amundsen & Martinsen, 2014). To address this dichotomy, nurse managers are encouraged to assist nurses to identify aspects of practice where they can exercise their autonomy and decision-making to optimize patient, staff and unit outcomes (Dahinten et al., 2016).

Implications for Nursing Education

The current study findings highlight the important role that nurse manager LEB plays in enhancing nurse self-efficacy, interprofessional collaboration, patient and nurse outcomes. These findings align with previous research and suggest the importance of positive relational leadership styles during healthcare system change on patient care and stabilization of the workforce (Cummings et al., 2018; Wong et al., 2013). Education to support nurse managers with the development of these important behaviours is

paramount. Academic institutions may offer graduate nurse manager programs incorporating LEB and interprofessional collaboration theory, together with content to address role clarity, role valuing, communication, power sharing and shared decision-making (Kretzchmer et al., 2017; Orchard et al., 2005; Regan et al., 2016). Formal academic programs and nurse manager certificate programs that include LEB and interprofessional collaboration content are ways to develop nurse manager skillsets and promote role clarity.

Undergraduate education programs provide opportunities to immerse students theoretically and practically in a classroom culture of interprofessional collaboration. Socialization and understanding of interprofessional team member roles will promote collaborative practices in the healthcare environment (Orchard et al., 2005; Peabody & Demanchick, 2016; World Health Organization, 2010). In the literature, interprofessional training has been linked to increased self-efficacy among students from a variety of professions, including nursing, medicine, physiotherapy, occupational therapy, laboratory technology, and radiology (Norgarrd et al., 2013). In alignment with Bandura's (1997) work, Luthans, Luthans, & Avey (2014) state that the development of self-efficacy is pliable; thus, it can be changed and developed. As well, Manojlovich (2005) recommends onboarding programs for new staff that support repetition and mastery of skills, role modeling and positive feedback to support the development of self-efficacy. Ongoing development of self-efficacy from novice to experienced nurse may be enhanced through the nurse manager's operationalization of LEB using Bandura's sources of information (Bandura, 1977, 1997; Luthans et al., 2014).

Implications for Policy

Leaders in healthcare organizations may choose to embed LEB and behaviours

that support nursing staff and interprofessional collaboration in organizational activities and documents. Inclusion of LEB in nurse manager hiring processes (e.g. role descriptions, interview questions) will reinforce the importance of empowering leader behaviour to nurse manager applicants and support the selection of candidates who routinely demonstrate these behaviours in their nursing practice. Embedding LEB and supportive management practices in annual manager performance management processes will reinforce expected behaviour on an ongoing basis.

This research study has highlighted the challenges researchers face with accessing data that reflects the outcomes of interest. While self-reported assessments of clinical outcomes (e.g. adverse events) have been criticized due to the risk of bias (Singer, Lin, Falwell, Gaba, & Baker, 2009), researchers encounter challenges with accessing organizational databases, or report a lack of reporting mechanisms, turning instead to nurse-reported data (Wong & Giallonardo, 2013). In support of nurse assessments of adverse patient events, Cina-Tschumi, Schubert, Kressig, DeGeest, and Schwendimann (2008) reported significant correlations between nurse assessments of falls with injury and hospital data bases. Financial investment is needed to create standardized organizational systems that accurately and efficiently capture adverse patient events, with accessible reports for research purposes.

The findings of this research study can be generalized to hospital nurses working in Alberta, Ontario and Nova Scotia, only. As part of the research process, application to the registering body in each Canadian province and territory must be made to secure a randomized list of registered nurses. A centralized process would streamline the application process and promote an inclusive approach. Assuming adequate sample sizes from each province would promote generalizability of research findings across Canada.

Implications for Future Research

The importance of nurse manager LEB in enhancing nurse self-efficacy and interprofessional collaboration has been highlighted in this research involving experienced hospital nurses. Future research is needed to understand the relationship of LEB more broadly with all nurses, regardless of tenure, as well as nurses in a variety of healthcare settings, such as community and long-term care settings. An examination of which LEBs and sources of information contribute most to the development of nurse self-efficacy will inform nurse manger and undergraduate education programs. In a recent analysis of the antecedents of nurses' leadership self-efficacy, Cziraki, Read, Laschinger and Wong (2018) recommended the provision of leadership mastery experiences and mentorship support as two sources of information that promote the development of leadership self-efficacy. This study design may be adapted to examine the antecedents of nurses' self-efficacy in relation to LEB and sources of information such as coaching, mentoring, and provision of resources to promote professional growth.

Cross-sectional research designs are limited to one point in time (Polit & Beck, 2012). Longitudinal study designs are preferred since this approach facilitates measurement of changes over time; thus, causality can be inferred (Polit & Beck, 2012). Future research may also consider the perspectives of interprofessional team members to gain a more holistic understanding of the impact of LEB on self efficacy and interprofessional collaboration. Mixed methods are invaluable in gathering both empirical and rich qualitative data, which in turn may inform further research. The hypothesized model was limited to five variables. Many other factors (individual or environmental) not accounted for in this research, such as nurse manager span of control and staffing levels, may explain or contribute to how LEB influences the dependent variables.

Mediation effects may be at play that were not accounted for here (Cheong et al., 2016). For example, trust in the leader, leader-member exchange, professional practice environments, structural empowerment and quality of work-life may act as mediators in the relationships between LEB, self-efficacy, interprofessional collaboration, nurse-assessed adverse events and job turnover intentions (Lee et al., 2018). Lee et al., (2018) in their meta-analysis reported that trust and leader-member exchange act as mediators in the relationships between empowering leadership and task performance, organizational citizenship behaviour and creativity. This may be explained by the favourable response of employees when managers provide access to resources. Last, the order of the five variables may be different than hypothesized in this research, providing alternative models for testing. For example, interprofessional collaboration may act as an antecedent to nurse manager LEB. Alternatively, interprofessional collaboration may demonstrate interaction effects on LEB relationships with dependent variables.

Future longitudinal research designs must consider the longevity of the nurse and nurse manager relationship to determine if any changes can be attributed to this association. Currently, nurse manager tenure in the role is approximately five years (Warshawsky & Havens, 2014). It is therefore possible that nurses experience different nurse managers over the course of a longitudinal research study. In addition, demographic surveys should capture movement to other patient units, which would infer practising with a new nurse manager and alongside new interprofessional team members. Examination of the influence of nurse manager gender on the relationship between LEB and nurses' self-efficacy and interprofessional collaboration is also warranted; Cheong et al., (2019) claim interpersonal (relational) leadership styles are most effective when demonstrated by female leaders.

This research was conducted at the individual level of analysis only; thus, it generated a very limited understanding of how LEB influences outcomes. Cheong et al., (2019) and Lee et al., (2018) recommend research to explore empowerment at other levels of analysis, including team, and organizational levels to determine if empowerment ratings vary. These scholars argue that employees may be empowered at one level (i.e. unit) but not at another level (i.e. organization). Such approaches will require careful selection of theory to guide research studies. Given the current interest in collaborative practice in healthcare organizations, the Theory of Work Team/Group Empowerment Within Organizations (TWGEWO) developed by Sieloff and Bularzik (2011) may provide a suitable theoretical framework. Friend and Sieloff (2018) describe the TWGEWO theory as a nursing conceptual theory based on King's (1981) theory, which focuses on teams or groups who are responsible for empowering themselves. In this theory, empowerment is limitless; teams or groups can increase their levels of empowerment without compromising the levels of empowerment in other teams or groups (Friend & Sieloff, 2018). Integral to this theory, the role of the manager is to create the conditions for nursing teams and groups to empower themselves, who in turn deliver increased quality of care (Fiend & Sieloff, 2018).

While empowering leader behaviour has been associated with positive outcomes, attention has been drawn to a potentially negative aspect of this leadership style (Cheong et al., 2016). Cheong and colleagues reported two faces of empowering leadership as enabling and burdening (Cheong et al., 2016). These scholars purport that beyond the enabling process of empowering leadership lies the burdening effects when job induced tensions rise and negatively impact employees' work role performance (Cheong et al., 2016). Cheong et al., (2016) recommend leaders use empowering leader behaviour

judiciously to minimize employee perceptions of abdication of their leader's responsibilities. Research to explore this phenomenon in nursing populations is warranted to determine the optimal effect of LEB and whether the optimal level of LEB is different for employees based on their characteristics, such as age, education, or experience.

Importance of LEB in the Current Healthcare Environment

Operationalization of LEB by the nurse manager is important in the current healthcare environment. Leader empowering behaviours promote interprofessional collaboration, an important strategy and goal for optimizing patient outcomes and minimizing duplication and gaps in healthcare services. Leader empowering behaviours enhance nurses' self-efficacy, resulting in increased motivation and higher performance (Conger & Kanungo, 1988). In addition, demonstration of LEB by the nurse manager promotes the notion of knowledge workers described by Amundsen and Martinsen (2014), whereby power is shared, and decisions are made at the patient care level. Hui's (1994) LEB model provides positive concrete behaviours to mitigate employees' perceptions of powerlessness in the organization and optimize outcomes (Conger & Kanungo, 1988). Further, the nurse manager is well placed at the unit level to create the necessary conditions for interprofessional collaboration. When nurse managers demonstrate LEB, these positive behaviours influence and reinforce the value and contributions of each profession and how each team member contributes to improved patient, unit and organizational outcomes. As nursing roles and interprofessional models of care continue to evolve, LEB will be foundational to nurse managers' practice.

Conclusion

This dissertation demonstrated the importance of LEB in the current healthcare environment and supported the use of Hui's (1994) 16-item LEB instrument in nursing

research studies. Collaborative interprofessional environments provide a mechanism for understanding how nursing leadership influences the work environment, staff and patient outcomes. Leaders in healthcare and academic organizations are encouraged to develop strategies and education programs to reinforce the importance of LEB and interprofessional collaboration in the classroom and as part of nurse manager hiring processes and professional development programs. Replication of this study is warranted to examine the motivational effects of LEB on self-efficacy in the novice nurse population.

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APPENDIX A

INSTRUMENTS

Leader Empowering Behaviour Scale (Hui, 1994)

7-point Likert Scale (Strongly Disagree = 1; Neither Agree or Disagree = 4; Strongly Agree = 7)

My manager

Item	Leader Empowering Behaviour
1.Helps me understand the importance of my work.	Enhancing the meaningfulness of work
2. Helps me understand how my work fits into "the bigger picture."	Enhancing the meaningfulness of work
3. Helps me understand how the objectives and goals of my nursing unit relate to that of the entire organization.	Enhancing the meaningfulness of work
4. Helps me understand the purpose of my work.	Enhancing the meaningfulness of work
5. Provides many opportunities for me to express my opinions	Fostering participation in decision making
6. Often consults me on work issues.	Fostering participation in decision making
7. Makes many decisions with me.	Fostering participation in decision making
8. Always shows confidence in my ability to do a good job.	Expressing confidence in high performance
9. Believes that I can handle demanding tasks.	Expressing confidence in high performance
10. Believes in my ability to improve even when I make mistakes.	Expressing confidence in high performance
11. Helps me overcome obstacles to my performance	Facilitating goal accomplishment
12. Helps me to identify what I need in order to achieve my performance goals.	Facilitating goal accomplishment
13. Always makes sure that I have the resources needed for effective performance.	Facilitating goal accomplishment
14. Makes it more efficient to do my job by keeping the rules and regulations simple.	Providing autonomy from bureaucratic constraints
15. Allows me to do my job my way.	Providing autonomy from bureaucratic constraints
16. Encourages me to make important decisions that are directly related to my job.	Providing autonomy from bureaucratic constraints

Self Efficacy (Luthans, Avolio, Avey and Norman, 2007)

6-point Likert Scale (Strongly Disagree = 1; Strongly Agree = 6)

Item
1.I feel confident analyzing a long-term problem to find a solution.
2. I feel confident helping to set targets/goals in my work area.
3. I feel confident presenting information to a group of colleagues.

Interprofessional Collaboration Scale (Laschinger and Smith, 2013)

5-point Likert Scale (Strongly Disagree = 1; Strongly Agree = 5).

Item
1.On my unit all health professionals collaborate effectively to provide patient care.
2. Interprofessional collaboration is highly valued on my unit.
3. I believe my knowledge is respected by other health professionals when I participate in interprofessional groups.
4. Health care professionals on my unit understand each other's role in providing holistic patient care.
5. On my unit, the patient is considered part of the health team.

Nurse-Assessed Adverse Patient Events (Sochalski, 2001)

4-point Likert Scale (Never = 1; Frequently = 4)

Over the past year, how often would you say each of the following incidents has occurred involving you or your patients?

Item
1. Patient received wrong medication or dose.
2. Nosocomial infections.
3. Complaint from patient or their family.
4. Patient Falls with Injuries.

Job Turnover Intention (Kelloway et al., 1999)

5-point Likert Scale (Strongly Disagree = 1; Strongly Agree = 5)

Item
1. I plan on leaving my job in the next year.
2. I have been actively looking for other jobs.
3. I want to remain in my job.

Demographic Questionnaire

1. Gender ☐ Female ☐ Male
2. Age (in years) _____
3. Did you attend a Compressed Time Frame/Second Entry Baccalaureate Program?

   ☐ Yes ☐ No
4. Highest degree in Nursing:

   ☐ College Diploma = 1 ☐ BScN = 2 ☐ Graduate Degree = 3
5. Current Employment Status

   ☐ Full Time ☐ Part Time ☐ Casual
6. How long have you worked:

As an RN ____Years RNYR ____Months RNMO

As an RN at your current organization ____Years ORGYR ____Months ORGMO

As an RN on your current unit ____Years UNTYR ____Months UNTMO

7. Specialty area of your current place of work/unit:

☐ Medical-Surgical = 1 ☐ Critical Care = 2 ☐ Maternal-Child = 3

☐ Mental Health = 4 ☐ Community Health = 5 ☐ Other = 6, please specify

___SPECO

APPENDIX B

ETHICS APPROVAL

Western Research

Research Ethics

Western University Health Science Research Ethics Board
HSREB Delegated Initial Approval Notice

Principal Investigator: Dr. Heather Laschinger
Department & Institution: Health Sciences\Nursing,Western University

HSREB File Number: 105448
Study Title: The Protective Role of Authentic Leadership against Workplace Bullying, Early Career Burnout and Premature Turnover of New Graduate Nurses: A Longitudinal Study
Sponsor: Social Sciences and Humanities Research Council

HSREB Initial Approval Date: August 07, 2014
HSREB Expiry Date: July 31, 2017

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Instruments	Quantitative Survey	2014/06/06
Instruments	Qualitative instrument	2014/06/06
Recruitment Items	Recruitment poster for qualitative interviews	2014/06/06
Letter of Information & Consent	LOI and Consent forms - Qualitative Interview	2014/06/06
Letter of Information & Consent	Appendix D - LOI and CONSENT THE PROTECTIVE ROLE OF AUTHENTIC LEADERSHIP -Survey - 15.07.2014 Revised LOI - Clean copy	2014/07/15
Western University Protocol		2014/07/31

The Western University Health Science Research Ethics Board (HSREB) has reviewed and approved the above named study, as of the HSREB Initial Approval Datenoted above.

HSREB approval for this study remains valid until the HSREB Expiry Date noted above, conditional to timely submission and acceptance of HSREB ContinuingEthics Review. If an Updated Approval Notice is required prior to the HSREB Expiry Date, the Principal Investigator is responsible for completing andsubmitting an HSREB Updated Approval Form in a timely fashion.

The Western University HSREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), theInternational Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use Guideline for Good Clinical PracticePractices (ICH E6 R1), the Ontario Personal Health Information Protection Act (PHIPA, 2004), Part 4 of the Natural Health Product Regulations, Health CanadaMedical Device Regulations and Part C, Division 5, of the Food and Drug Regulations of Health Canada.

Members of the HSREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when theyare presented to the REB.

The HSREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000940.

Ethics Officer, on behalf of Dr. Joseph Gilbert, HSREB Chair

Ethics Officer to Contact for Further Information

Erika Basile	Grace Kelly	Mina Mikhail	Vikki Tran
ebasile@uwo.ca	grace.kelly@uwo.ca	mmikhail@uwo.ca	vikki.tran@uwo.ca

This is an official document. Please retain the original in your files.

APPENDIX C

SURVEY LETTER OF INFORMATION

Western
Arthur Labatt Family
School of Nursing

Project Title: The Protective Role of Authentic Leadership against Workplace Bullying, Early Career Burnout and Premature Turnover of New Graduate Nurses: A Longitudinal Study

Principal Investigator:
Heather K. Laschinger, RN, PhD, FAAN, FCAHS - The University of Western Ontario

SURVEY LETTER OF INFORMATION FOR EXPERIENCED NURSES

Invitation to Participate
You are being invited to participate in a research study examining newly graduated registered nurse experiences in the workplace. Although we recognize that you are no longer a new graduate we would like to hear your feedback in order to help us more accurately understand the current nursing work environment through the lens of an experienced nurse.

Purpose of the Letter
The purpose of this letter is to provide you with information required for you to make an informed decision regarding participation in this research.

Purpose of the Study
The purpose of this study is to describe new graduate nurses' worklife experiences in Canadian health care settings during the first three years of practice. This study will examine the role of leadership behaviours in preventing burnout and bullying and resulting job and career satisfaction and turnover intentions. We would also like to gain a better understanding of the current nursing work environment through the lens of new graduate nurses across the country.

Inclusion Criteria
In order to participate in this research project you must be a practicing registered nurse who has graduated sometime before January 1st, 2012.

Study Procedures
If you agree to participate, you will be asked to complete the included survey consisting of questions examining the influence of leadership on your experiences at work. It is anticipated that the entire task will take approximately 20 minutes of your time. This survey has been sent to 400 newly graduated nurses and 400 experienced nurses in Alberta, Ontario and Nova Scotia. Once you have completed your survey, please place it in the self-addressed envelope provided and put it in the mail. If you choose to participate you will receive a follow-up survey 8 months and 16 months later to track your experience over time.

Possible Risks and Harms
There are no known or anticipated risks associated with participating in this study. There is a chance that you may feel uncomfortable answering questions about your work environment on the survey. Care will be taken to ensure confidentiality of survey data and we will respect your privacy. Also, you will not have to answer any questions if you feel uncomfortable. You may refer to your Employee Assistance Plan representative if you need to talk to someone further about these issues.

Possible Benefits
We cannot guarantee you any direct benefits as a result of your participation in this study. However, this study will show how leadership influences new graduate and nurses' experiences of bullying and burnout, and how these factors affect new graduate nurse satisfaction and intentions to remain in their jobs and the profession within the first three years of practice. This information can be used to retain a satisfied and engaged workforce.

In addition, further knowledge of the value and benefits of authentic leadership development across Canada will be discussed. As a result, this information can be used to inform policy and organizational initiatives that will attract and retain new graduate nurses. A summary of findings from the final report will be made available to participants on the HKL research website at the following link: http://publish.uwo.ca/~hkl/chair/index.html

Compensation
You have received a $2 Tim Hortons card as a token of appreciation for your time to complete the questionnaire. You may keep the enclosed $2 Tim Hortons card whether or not you choose to complete the survey. In addition, you have the opportunity to participate in a draw to win one of three iPad Minis. Please respond to the ballot provided in the survey package.

Voluntary Participation
Participation in this study is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your future employment or study compensation.

Confidentiality and Privacy
As a participant you will be given a personal identification number (PIN) that will be used to link your data from each year. The researchers at The University of Western Ontario will link study PINs to your name only for the purposes of distributing information letters and surveys to you for this particular study. Data will be sent directly to Western with only the PIN as the identifier. All participant names and assigned PINs will be destroyed as soon as the data collection is complete. The survey distribution will consist of the survey included here, a reminder letter in four weeks to non-respondents, and finally a second distribution of the survey asking non-respondents to complete the survey if they haven't yet done so.

All data collected will remain confidential and accessible only to the investigators of this study. If the results are published, your name will not be used. If you choose to withdraw from this study, your data will be removed and destroyed from our database. Representatives of The University of Western Ontario Health Sciences Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

Contacts for Study Questions or Problems
If you require any further information regarding this research project or your participation in the study you may contact Dr. Heather Laschinger (contact information removed).

If you have any questions about your rights as a research participant or the conduct of this study, you may contact (contact information removed).

Consent
Completion of the survey is indication of your consent to participate.

Sincerely,

Heather K. Spence Laschinger, RN, PhD, FAAN, FCAHS
Distinguished University Professor
Nursing Research Chair in Health Human Resource Optimization
Arthur Labatt Family School of Nursing
The University of Western Ontario
(Contact information removed).

This letter is yours to keep for future reference.

CURRICULUM VITAE

Name: Karen Cziraki

Post-secondary Education and Degrees:

McMaster University
Hamilton, Ontario, Canada
1992-1996, BScN

McMaster University
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2009-2012, MSc (Nursing)

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Honours and Awards:

Entrance Scholarship, University of Western Ontario (2013)

RNAO Bursary, RNAO, Hamilton Chapter (2010)

School of Nursing Scholarship, McMaster University (2010)

Entrance Scholarship, McMaster University (2007)

Nursing Excellence Award for Leadership, Brant Community Healthcare System (1999)

Nursing Excellence Award for Nursing Teamwork, Brant Community Healthcare System (1999)

Recipient of the University Scholarship for outstanding academic achievement McMaster University (1996)

Fardon Memorial Gold Medal Award and Valedictorian MacDonald Buchanan & Lorna Delve School of Nursing for outstanding academic and clinical performance (1981)

Related Work Experience:

2015-Present	Professional Practice Specialist, Cambridge Memorial Hospital
2013	Research Assistant for Dr. Heather Laschinger
2012- 2014	Integrated Professional Practice Specialist, Grand River & Cambridge Memorial Hospitals

2009-2012	Coordinator, HNHB LHIN BPSO Project
2002-2009	Clinical Manager, Hamilton Health Sciences – Emergency Department, Cardiac Surgical ICU, Ambulatory Care
2000-2002	Manager, Cambridge Memorial Hospital - ICU, ED & Fracture Clinic
1999-2000	Acting Unit Manager, Brantford General Hospital - Critical Care
1993-1999	Nurse Clinician/Educator Critical Care - Brantford General Hospital
1987-1993	Registered Nurse, Brantford General Hospital - Critical Care
1985-1986	Clinical Instructor for English National Board Course 100 in Intensive Care Nursing, Northwick Park Hospital, London, England
1981-1985	RN ICU & Medical/Surgical Patient Units, Middlesex, Royal Free and Northwick Park Hospitals in London, England.

Publications:

Cziraki, K., Read, E., Laschinger, H., & Wong. C. (2018). Nurses' leadership self-efficacy, motivation and career aspirations. *Leadership in Health Services, 31*(1), 47-61.

Ploeg, J., Ireland, S., Cziraki, K., Northwood, M., Zecevic, A., Davies, B., Murray, M.A., & Higuchi, K. (2018). A sustainability oriented and mentored approach to implementing a fall prevention guideline in acute care over 2 years. *SAGE Open Nursing, 4*, 1-17.

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